

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

City of Auburn Wastewater Treatment Plant Secondary Process Upgrade

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1 INTRODUCTION

1.1 Project Overview

The City of Auburn is proposing a number of upgrades to the City of Auburn's Wastewater Treatment Plant (WWTP) to improve performance, add process redundancy, and comply with anticipated future permit limitations.

1.2 California Environmental Quality Act Compliance

This initial study has been prepared per the requirements of the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code [PRC] Section 21000, et seq.), and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.).

1.3 Project Planning Setting

The proposed project is located within the City of Auburn, an incorporated City within Placer County.

1.4 Public Review Process

The initial study, and the proposed Mitigated Negative Declaration, will be circulated for public review for a period of 30 days, pursuant to Guidelines Section 15073(a).

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2 SUMMARY OF FINDINGS

2.1 Environmental Factors Potentially Affected

This initial study considers the environmental issues identified in Appendix G of the CEQA Guidelines.

2.2 Environmental Determination

The lead agency finds that the initial study identifies potentially significant effects, but that revisions to the project would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur. There is no substantial evidence that the project as revised would have a significant effect on the environment.

**Table 2-1
Mitigation Summary**

Number	Measure
BIO-1	A nesting bird survey shall be conducted 30 days prior to the onset of any construction activity occurring within the nesting period (February 15-August 31). If nesting birds are detected during surveys, a qualified biologist shall be retained to determine an appropriate buffer depending on construction activities, nest location, and species. If necessary, consultation with CDFW will be sought. A worker Environmental Awareness Training may be provided to workers with information regarding the possibility of nesting birds on the project site and the course of action to take should a nest be encountered during construction.
CUL-1	Should archaeological material be identified in the area during earth moving activities, work should be temporary halted, and the City consulted. A qualified archaeologist will be assigned to review the unanticipated find, and evaluation efforts of this resource for CRHR listing will be initiated in consultation with the City. Should human remains be discovered, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to the City and County Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.

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3 INITIAL STUDY CHECKLIST

1. Project title:

City of Auburn Wastewater Treatment Plant Secondary Process Upgrade

2. Lead agency name and address:

City of Auburn
1225 Lincoln Way
Auburn, California 95603

3. Contact person and phone number:

Reg Murray, Senior Planner
City of Auburn, Planning & Public Works Department
530-823-4211 ext. 140

4. Project location:

The City of Auburn Wastewater Treatment Plant (WWTP) is located at 10441 Ophir Road, Auburn, California, 95603 (Figures 1, 2, and 3).

5. Project sponsor's name and address:

City of Auburn, Public Works Department
1225 Lincoln Way
Auburn, California 95603

6. General plan designation:

The WWTP site is designated as "Industrial (IND)" in the City of Auburn General Plan (City of Auburn, 1993).

The wastewater system serves the entire City, which is designated for various land uses in the 1992-2012 General Plan, including residential, commercial, industrial, open space, mixed use, urban reserve, and agriculture.

7. Zoning:

As shown on the City of Auburn Zoning Map, the WWTP site is zoned "Industrial District" (Zone M-2). The plant serves the entire City, which is zoned for various uses, including residential, commercial, highway service, mixed use, industrial, open-space, and conservation, and agricultural.

8. Description of project:

The City of Auburn is proposing a number of secondary process upgrades to the City's WWTP to improve performance, add process redundancy, and comply with expected new permit limitations. The WWTP Secondary Process Upgrade project would construct

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a new oxidation ditch and associated facilities. The new oxidation ditch would be located within an existing treatment pond (see Figure 4).

The new oxidation ditch would remove nitrogen to the ammonia-nitrogen levels expected in future discharge permits (estimated at 0.7mg/L). The new system would both nitrify (convert organic nitrogen to nitrate) and denitrify (convert nitrate to nitrogen gas). The upgrades also provide process redundancy by allowing either the existing or proposed new oxidation ditch to be removed from service for inspection and repairs.

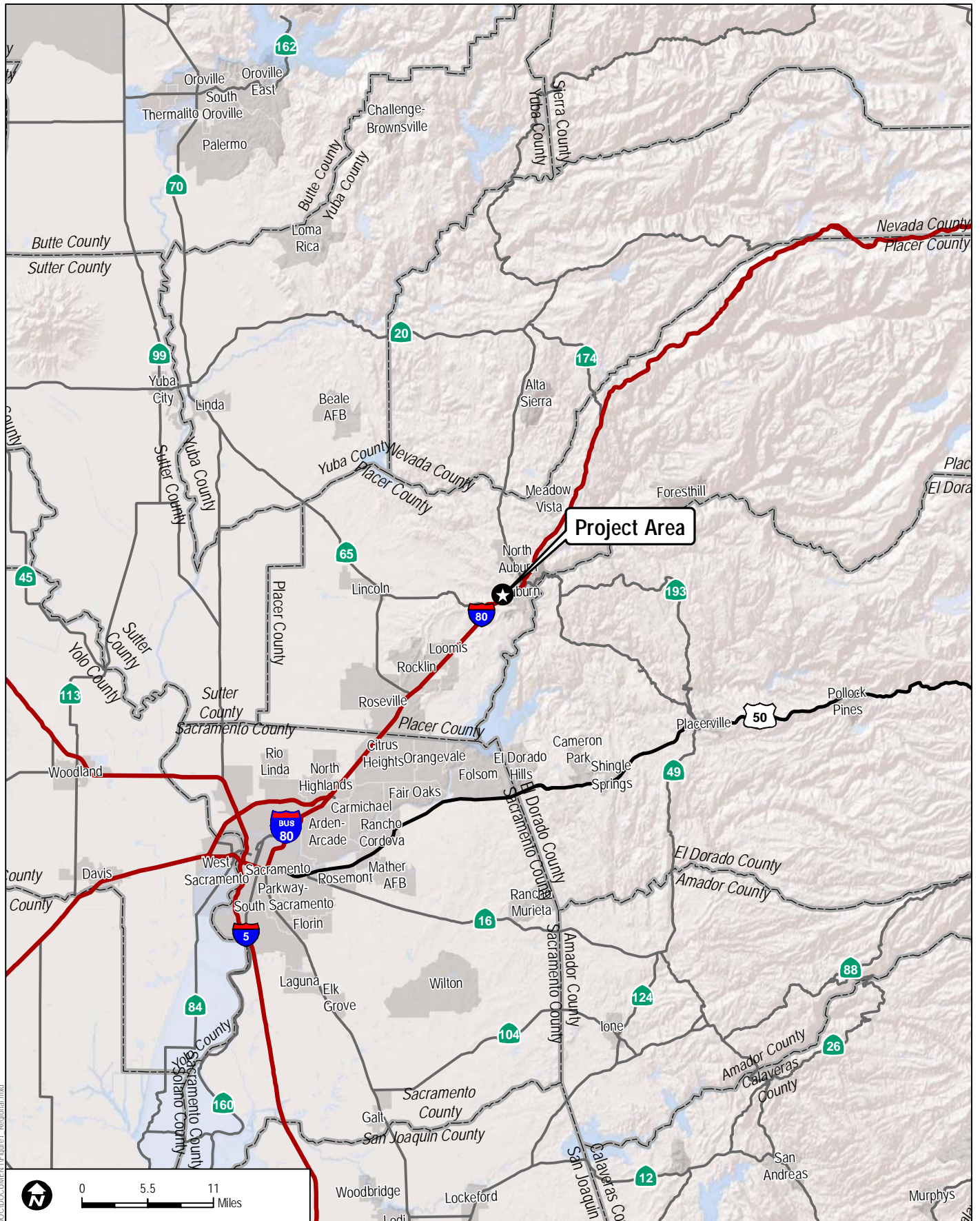
Several other supporting facilities would be required as part of the upgrade of the secondary treatment process (see Figure 4):

- New mechanical fine screens would remove small plastics and hair that currently make it through the secondary process and impact process performance. The existing grit chamber would be decommissioned (abandoned in place).
- The alkalinity system feed system would be modified. The existing lime additive would be changed for a more efficient system (likely magnesium hydroxide).
- The existing return sludge pump station (aboveground screw pump) would be replaced with a submersible pump station.
- A new electrical building would be located near the proposed oxidation ditch.
- Additional piping (mostly 12" and 16" diameter pipes) would be installed within the existing facility.

In addition to reducing nitrogen levels in the effluent, the project would reduce power consumption. The new aerators will be about 25% more efficient than the existing aerators.

The proposed project would not increase the capacity of the plant, which has a currently permitted discharge of 1.67 million gallons per day (mgd) average dry weather flow. The plant currently serves a population of 13,800 people. The proposed change in the treatment process would, however, allow for future expansion of the plant consistent with the City's General Plan. The facilities are designed to serve a residential population of up to 18,000 people over the next 30 years.

The project has an estimated construction time of two years, beginning in the fall of 2015. Construction of the cement-lined oxidation ditch would be the most intense phase of construction, requiring approximately 200 cement truck trips. During the switch from the current to the proposed oxidation ditch, a temporary pump and generator would likely be in operation.



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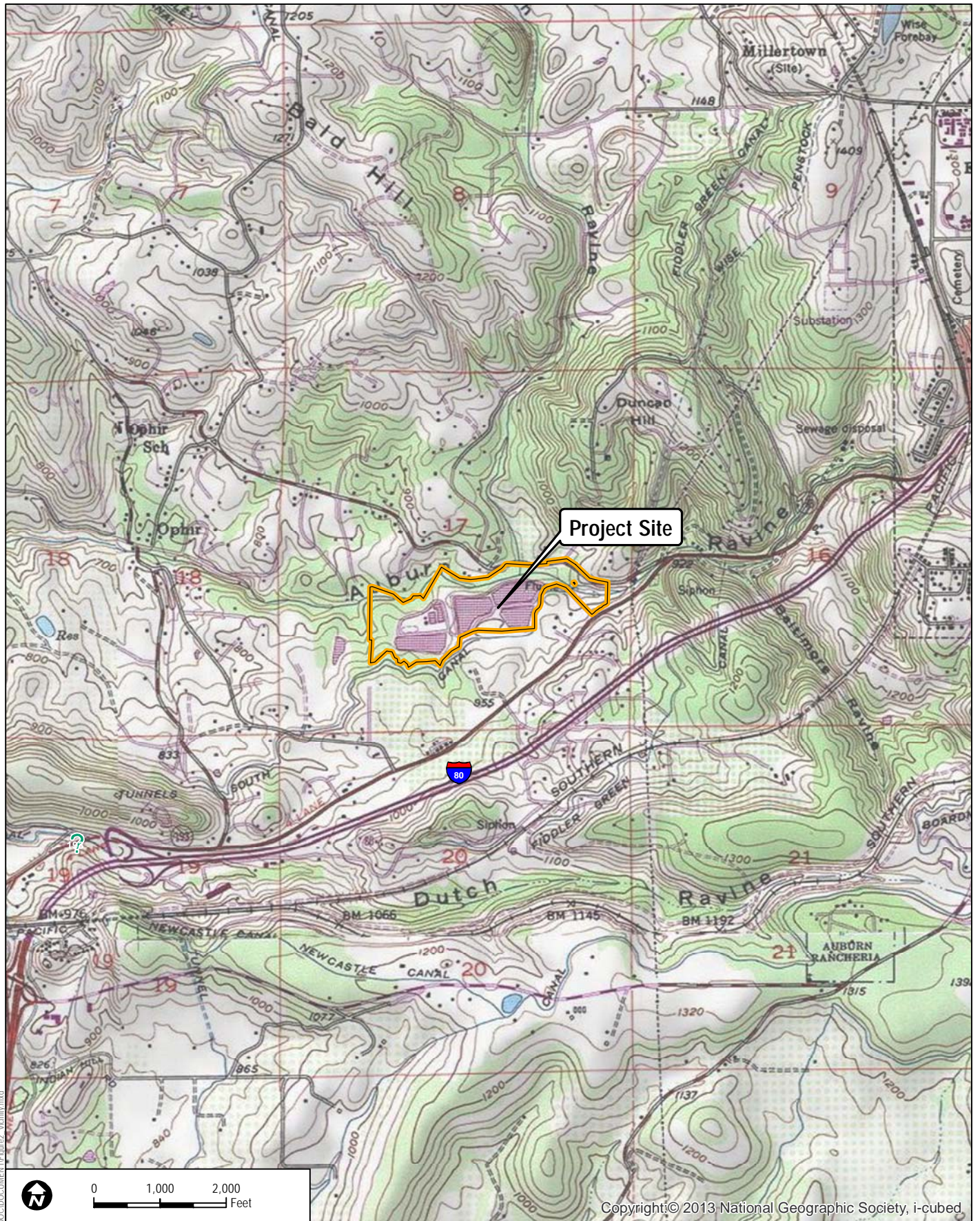
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AUBURN WASTEWATER TREATMENT PLANT IMPROVEMENTS PROJECT

FIGURE 1
Regional Map

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SOURCE: USGS 7.5-Minute Series Auburn Quadrangle.

AUBURN WASTEWATER TREATMENT PLANT IMPROVEMENTS PROJECT

FIGURE 2
Vicinity Map

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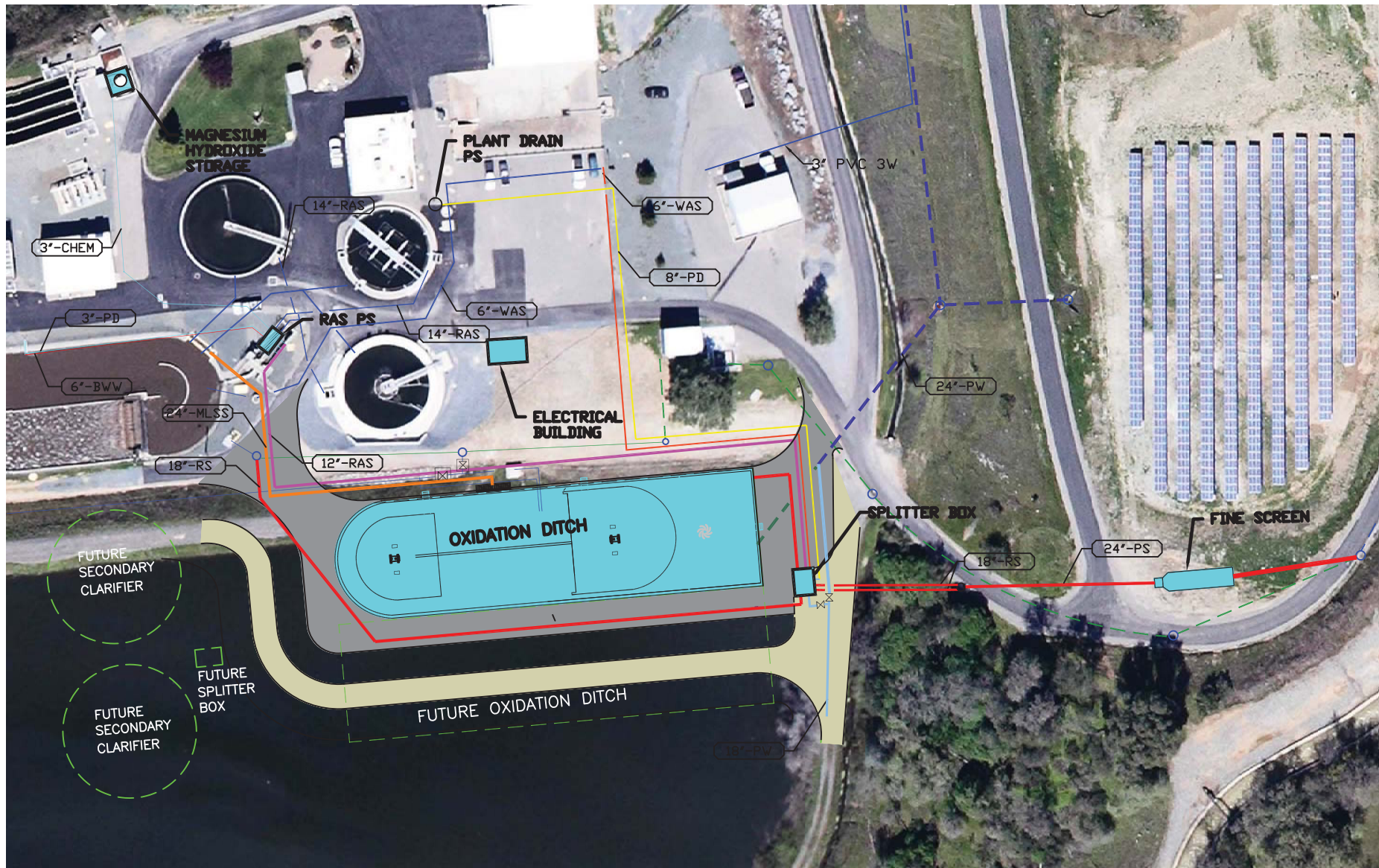


	Project Boundary
	Parcel Boundary

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SOURCE: NextGen 2014

**FIGURE 4
Site Plan**

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AUBURN WASTEWATER TREATMENT PLANT IMPROVEMENTS PROJECT

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9. Surrounding land uses and setting:

The WWTP site is bounded on the north by Auburn Ravine Creek, the west and south by rural residential and woodland habitat, and the east by the remainder of the WWTP property, which includes associated structures and a paved parking lot.

The water and wastewater system serves the City of Auburn, which is approximately 7 square miles, located at the junction of Interstate 80 and State Route 49, in Placer County. The City has a current population of 13,800 with 6,239 housing units (DOF 2014).

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

The proposed project would require funding under the Clean Water State Revolving Fund (CWSRF), administered by the State Water Resources Control Board (“Board”). The Board will use this initial study as a CEQA responsible agency. In addition, because the CWSRF includes funds from the United State Environmental Protection Agency, the project must also comply with the applicable CWSRF Program federal environmental statutes and authorities (also referred to as the federal cross-cutters).

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact,” as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation and Traffic | <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

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DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Signature

Date

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EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an Environmental Impact Report (EIR) is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

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- c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IX. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
X. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1 Aesthetics

a) *Would the project have a substantial adverse effect on a scenic vista?*

The project is not located within or near an identified scenic vista, a state of federal scenic byway or any other officially designated scenic resource, based on a review of the City of Auburn General Plan (City of Auburn, 1993). Therefore, impacts to scenic vistas would be **less than significant**.

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- b) *Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Interstate 80, located approximately one mile south of the WWTP, is not designated as a scenic highway (Caltrans, 2014). No rock outcroppings or other significant geographic features would be affected by the project, and there are no historic buildings located on the property. One mature tree on-site may be removed, but it is not visible from a public right-of-way (including a scenic highway). Therefore, **no impact** to scenic resources would occur.

- c) *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

The project would result in the construction of a new oxidation ditch and associated facilities including: a new electrical building, new mechanical fine screens; a new alkalinity feed system; and a new return sludge pump station. On site, there is currently one existing oxidation ditch that was constructed in the late 1970s. The proposed project would take the existing oxidation ditch out of service for inspection and repairs, and would construct the new ditch within one of the existing treatment ponds, immediately adjacent to the existing ditch.

Because the new oxidation ditch and associated facilities would be constructed entirely within the existing WWTP site footprint and would be designed consistently with the existing industrial nature of the site, the project would not substantially change the character or quality of the site or its surroundings. Therefore, impacts would be **less than significant**.

- d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No additional lighting is proposed as part of the project. The new pump building may require an exterior door light for safety. This building is located near several other facilities and would not introduce lighting to a currently unlit area. Light/glare impacts would be **less than significant**.

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3.2 Agriculture and Forestry Resources

- a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

The WWTP site is located on land designated by the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) as "Urban and Built-up Land" and does not include any prime farmland, unique farmland or Farmland of Statewide Importance (CDC, 2013). Furthermore, the project upgrades would be located entirely within the building footprint of the existing WWTP. The project would result in **no impact** to farmland.

- b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

Based on a review of the California Department of Conservation's 2013-2014 Williamson Act Map for Placer County, the project area does not include land subject to a Williamson Act contract (CDC, 2013a). The project area is located entirely within the existing WWTP site, which does not include agricultural land zoning designations. Therefore, the project would have **no impact** related to conflicts with existing zoning or Williamson Act contracts.

- c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

The project site is zoned for industrial uses and currently supports the City's existing WWTP. The proposed project upgrades would occur within the existing WWTP footprint and would not conflict with zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production land. Therefore, the project would result in **no impact** to forest land or timberland.

- d) *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. The proposed project involves upgrades the City's existing WWTP. **No**

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impact related to the loss or conversion of forest land would occur with implementation of the proposed project.

- e) *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

The project involves improvements at the City's existing WWTP. Therefore, due to the nature and location of the project site, no Farmland would be converted to a non-agricultural use and **no impact** would occur.

3.3 Air Quality

- a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

The federal and state Clean Air Acts define allowable concentrations of several air pollutants. When monitoring indicates that a region regularly experiences air pollutant concentrations that exceed those limits, the region is designated as non-attainment and is required to develop an air quality plan that describes air pollution control strategies to be implemented to reduce air pollutant emissions and concentrations.

The project site is located within the Sacramento Valley Air Basin, which is designated non-attainment for the federal and state 8-hour ozone standards, the federal particulate matter (PM_{2.5}) standard, and the state particulate matter (PM₁₀) standard. The area is in attainment or unclassified for all other state and federal standards.

To address the region's non-attainment status, the Air Quality Management Districts and Air Pollution Control Districts in the air basin have prepared the Sacramento Area Regional Ozone Attainment Plan, or the State Implementation Plan. Ozone is created as a result of a chemical reaction between reactive organic gases (ROG) and nitrogen oxides (NO_x). The Sacramento Area Regional Ozone Attainment Plan identifies land use and transportation control measures to be applied to development projects in order to reduce emissions of the pollutants that create ozone.

Because the proposed project would not violate air quality standards or exceed emissions thresholds as discussed in item (b) below, is consistent with the City of Auburn and Placer County General Plans, and is generally consistent with current air quality management policies, the project is not anticipated to conflict with the Sacramento Area

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Regional Ozone Attainment Plan. Therefore, impacts related to the project's potential to result in conflicts with applicable air quality plans would be **less than significant**.

b) *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

In evaluating whether a development project would violate an applicable air quality standard, the Placer County Air Pollution Control District (APCD) recommends applying the APCD's New Source Review emissions standards to estimates of emissions during construction and during project operation. The New Source Review Rule pollutant emissions limits are listed in Table 3.3-1. In addition, the New Source Review Rule requires application of Best Available Control Technology for emissions sources that exceed these limits. Project emissions that exceed threshold values could have a significant effect on regional air quality and the attainment of federal and state standards. The thresholds apply to both construction and operational air pollutant emissions.

**Table 3.3-1
APCD Thresholds (pounds per day)**

Air Contaminant	Operational Threshold	Cumulative Thresholds
Reactive organic gases (ROG)	82	10
Nitrogen oxides (NO _x)	82	10
Particulate matter less than 10 microns in diameter (PM ₁₀)	82	N/A
Carbon monoxide (CO)	550	N/A

Construction Emissions

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site personal vehicles and trucks hauling construction materials. NO_x and CO emissions would result primarily from the use of construction equipment and motor vehicles. Fugitive dust (PM₁₀ and PM_{2.5}) emissions would primarily result from grading and site preparation activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

The proposed project would involve construction of physical improvements to the WWTP. The project was compared to the model results for a similar project, The City of Woodland Water Pollution Control Facility Project, which involved facility upgrades

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similar to those included in the proposed project. The emissions for the construction phase of the Woodland project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2013.2.2 (included as Appendix A). The City of Woodland project involved, among other improvement, a soil cement treatment on two existing settling ponds, modifications to four existing oxidation ditches, and construction of a blower building. Overall, the proposed construction for the Woodland project is more extensive than that proposed in Auburn. Therefore, this comparative analysis provides a conservative estimate of potential air quality impacts.

For purposes of estimating emissions associated with construction of the new oxidation ditch associated with the proposed project, calculations for the Woodland soil cement treatment were utilized and compared to Placer County APCD significance thresholds (see Table 3.3-2). For the Woodland soil cement treatment upgrades, it was assumed that construction would begin with site preparation and access ramp construction followed by rough grading of the site, which would include the use of a grader, scraper, and tractors/loaders/backhoes. Haul trips were modeled on the import of an estimated 461 tons of lime and 928 tons of cement – a much larger quantity than is proposed in Auburn.

For purposes of estimating emissions associated with the proposed equipment upgrades at the Auburn WWTP, calculations for the Woodland oxidation ditch upgrades were utilized and compared to Placer County APCD significance thresholds (see Table 3.3-3). The Woodland project involved modifications of four existing oxidation ditches and construction of a blower building on a 0.26 acre pad. This is comparable to the proposed Auburn project, which includes installation of aerators at the newly constructed oxidation ditch, construction of a new electrical building, construction of a new return activated sludge pump, the replacement of the existing grit chamber (abandoned in place) with a new mechanical screen, and various repiping.

Table 3.3-2 and Table 3.3-3 display the estimated maximum unmitigated daily emissions generated during construction of the proposed new oxidation ditch and associated equipment upgrades. Only the daily PM₁₀ emissions are compared to the APCD significance threshold; the emissions of other pollutants are presented for full disclosure.

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Table 3.3-2
Air Pollutant Emissions During Construction of Oxidation Ditch
(pounds per day unmitigated)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	2.89	33.14	19.48	0.03	18.38	4.11
PCAQMD Threshold	N/A	N/A	N/A	N/A	82	N/A
Threshold Exceeded?	N/A	N/A	N/A	N/A	No	N/A

Source: City of Woodland, Initial Study and Mitigated Negative Declaration for the 2014 WPCF Improvements and Water/Wastewater Line Repairs (SCH# 2014012009), February 2014.

Table 3.3-3
Air Pollutant Emissions During Construction of Equipment Upgrades
(pounds per day unmitigated)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	5.89	14.51	9.45	0.02	11.63	2.28
PCAQMD Threshold	N/A	N/A	N/A	N/A	82	N/A
Threshold Exceeded?	N/A	N/A	N/A	N/A	No	N/A

Notes: City of Woodland, Initial Study and Mitigated Negative Declaration for the 2014 WPCF Improvements and Water/Wastewater Line Repairs (SCH# 2014012009), February 2014.

As shown in Table 3.3-2 and 3.3-3, air pollutant emissions during project construction would remain below the New Source Review Rule thresholds and construction impacts would be **less than significant**.

Operational Emissions

The proposed project would construct a new oxidation ditch and associated facilities. The new oxidation ditch, which would be located within an existing treatment pond, would remove nitrogen to the ammonia-nitrogen levels expected in future discharge permits (estimated at 0.7mg/L). The new system would both nitrify (convert organic nitrogen to nitrate) and denitrify (convert nitrate to nitrogen gas). In addition to reducing nitrogen levels in the effluent, the project would reduce power consumption. The new aerators will be about 25% more efficient than the existing aerators. The project would not increase the capacity of the WWTP. The proposed project would not increase the amount of criteria air pollutants emitted during operation of the WWTP because ROG emissions are generally a function of wastewater throughput, which would not increase. Furthermore, the proposed project would not increase permanent employment at the WWTP or associated vehicle trips. Therefore, it is anticipated that the proposed project would not

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change current operational criteria air pollutant emissions, and operational impacts would be **less than significant**.

- c) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

As discussed above, the Placer County APCD New Source Review emissions standards are used to evaluate the potential for the project to contribute to cumulative air quality impacts. The New Source Review Rule pollutant emissions limits are listed in Table 3.3-1. As discussed above, the construction and operational emissions from the proposed project would not exceed the APCD significance thresholds. The proposed project would also not conflict with the applicable air quality plans, which address the cumulative emissions in the Sacramento Valley Air Basin. Accordingly, the proposed project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants. Impacts would be **less than significant**.

- d) *Would the project expose sensitive receptors to substantial pollutant concentrations?*

The greatest potential for exposing sensitive receptors to substantial pollutant concentrations would occur during construction, due to diesel particulate emissions from heavy equipment operations and heavy-duty trucks. Residential homes are sensitive receptors that could be exposed to substantial diesel particulate concentrations during construction. However, the nearest residential homes to the WWTP are located more than 600 feet away and would not likely be exposed to substantial pollutant concentrations. Construction of the WWTP improvements would be intermittent and temporary. Therefore, impacts to sensitive receptors in the vicinity of the construction of the proposed project would be **less than significant**.

- e) *Would the project create objectionable odors affecting a substantial number of people?*

Odors are a form of air pollution that is most obvious to the public. Odors can present significant problems for both the source and surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern.

Potential sources that may emit odors during construction activities include diesel equipment and gasoline-powered engines. Odors from these sources would be localized and generally confined to the WWTP. Additionally, odors associated with construction

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equipment would be temporary. Therefore, proposed project construction would not cause an odor nuisance.

Operation of the proposed project would include the continued operation of a wastewater treatment plant. The proposed upgrades to the WWTP would not result in greater discharges or larger amounts of odorous compounds being emitted from the WWTP. The source of odor tends not to be the oxidation ditch, but rather the settling ponds, which would not be affected by the proposed project. Therefore, impacts from creating objectionable odors that affect a substantial number of people would be **less than significant**.

3.4 Biological Resources

Dudek biologists conducted a biological field survey of the project site on October 30, 2014. The purpose of the field survey was to characterize the on-site biological resources and potential constraints to development of the site posed by identified resources.

Prior to the field survey, Dudek biologists performed a nine-quadrant query of the California Natural Diversity Database (CNDDDB) and U.S. Fish and Wildlife Service (USFWS) Endangered and Threatened species to obtain information about any state or federally listed species with the potential to be found on site. The results of the survey and constraints analysis, including query results from the CNDDDB and USFWS databases, are included in the Biological Memorandum (see Appendix B) and summarized below.

Project Location and Setting

The project area is mostly flat with an elevation of 840 feet. The site is bounded on the north by Auburn Ravine Creek, the west and south by undeveloped woodland habitat, and the east by the remainder of the WWTP property which includes associated structures and a paved parking lot. The location corresponds to 38°53'16" north latitude and 121°06'37" west longitude.

The existing oxidation ditch (approximately 275 feet x 75 feet) is located in the southwest corner of a paved area of the property and is surrounded by several buildings just to the north and east, oak woodland to the west and a gravel levee to the south. A dry vegetated depression which currently serves as a treatment pond (approximately 255 feet x 775 feet) exists south of the levee where the proposed oxidation ditch would be built. This treatment pond is used during peak wet weather flows, and contains non-native weedy vegetation. See Figure 5 for photographs of the project site.



Photo 1: Looking west across project site.



Photo 2: Looking east across project site.



Photo 3: Existing treatment pond



Photo 4: Looking west toward site of new oxidation ditch.



Photo 5: Looking southeast across site of new oxidation ditch.



Photo 6: Pine to be removed.

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Results of the CNDDDB and USFWS search indicated sixteen special-status plant and animal species known to occur within a five-mile radius of the site, although no occurrences were recorded on or immediately adjacent to the site (see Table 1 in Appendix B). None are expected to occur on site due to lack of available natural habitat and the highly disturbed nature of the site (Dudek 2014).

Vegetation

Currently, the site is characterized by a variety of non-native grasses and weedy dicots; about a dozen mature trees (*Quercus* sp., *Pinus* sp. and ornamentals) occur on the property immediately surrounding the project site. One ornamental pine located near the proposed oxidation ditch may be removed as part of the site preparation for the project (see Figure 4).

A small (40x60 feet) potential wetland was observed on the far eastern end of the dry vegetated depression (approximately 350 feet from project activities). No other wetlands or vernal pools, or plant species that would indicate these features, were observed on the project site (Dudek, 2014).

Wildlife

During the bird nesting season (February 15-August 31), raptor and songbird species commonly found in woodland and semi-open habitats could use the periphery of the site for nesting and the interior of the site for nesting (by ground-nesting species) and foraging (in the dry vegetated depression). While high-quality suitable habitat for special-status species does not occur on site, a number of common, more urban adapted species were observed or could potentially occur in the vicinity of the project. Nine bird species were observed on, or flying over the site, including

western scrub-jay (*Aphelocoma californica*), killdeer (*Charadrius vociferus*), red-tailed hawk (*Buteo jamaicensis*), white-crowned sparrow (*Zonotrichia leucophrys*), house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), bushtit (*Psaltiriparus minimus*), western bluebird (*Sialia mexicana*) and black phoebe (*Sayornis nigricans*).

The site could potentially be used as foraging habitat by common raptors such as red-tailed hawk and by songbirds such as American robin (*Turdus migratorius*).

The vegetation found on site does provide some cover for some wildlife species such as small mammals and reptiles. Reptiles such as northwestern fence lizard (*Sceloporus occidentalis*) and small to medium sized mammals such as mice (*Microtus* sp.) and raccoon (*Procyon lotor*) may use the site for foraging, movement and cover.

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CNDDDB and USFWS searches revealed one fish species that could potentially be affected by effluent from the project that flows into Auburn Ravine Creek: Central Valley steelhead (*Oncorhynchus irideus*). Surveys by CDFW in recent years have detected steelhead in this portion of Auburn Ravine Creek. However, according to Kevin Thomas (Dudek, 2014 citing Fisheries Biologist, CDFW, November 10, 2014) actual spawning locations and the size of the population in this creek is unknown. Regardless, the quality and quantity of the effluent from the WWTP would not change due to project improvements; therefore, the project would not have an impact on this species. The permitted capacity of the WWTP is an annual dry weather average of 1.67 million gallon per day (mgd), although current discharge is well below that amount, primarily due to the drought conditions (Dudek, 2014).

- a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Results of the CNDDDB and USFWS search indicated sixteen special-status plant and animal species known to occur within a five-mile radius of the site, although no occurrences were recorded on or immediately adjacent to the site. As indicated in the Biological Memorandum prepared for the project, the project site does not provide high quality habitat for any special-status plant or animal species, and no such species are expected to breed or otherwise utilize the site, due to the availability of high quality habitat nearby to the west and north (Dudek, 2014). Therefore, upgrades to the WWTP would not be expected to result in any adverse impacts to special-status biological resources.

However, the project site and oak woodland along the periphery could provide nesting habitat for native birds protected by the federal Migratory Bird Treaty Act and the California Fish and Game Code. Implementation of Mitigation Measure BIO-1, which would require a nesting bird survey 30 days prior to the onset of any construction activity occurring within the nesting period (February 15-August 31), would ensure that nesting birds would not be interrupted by construction activity and impacts would remain **less than significant**.

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- b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

The area of disturbance associated with the proposed project improvements would be entirely within the existing WWTP footprint. The project would have **no impact** on any riparian habitat or other sensitive natural communities.

- c) *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

A small (40x60 feet) area with typical wetland vegetation was observed on the far eastern end of the dry vegetated depression (pond). Because this pond is an active treatment pond that does not have a direct connection with jurisdictional waters, it is highly unlikely that this wetland feature is regulated under the Army Corps of Engineers (ACOE), CDFW and California Regional Water Quality Board (CRWQB). No other wetlands or vernal pools, or plant species that would indicate these features, were observed on the project site (Dudek, 2014). Therefore, there would be **no impact** to wetlands.

- d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

As indicated in the Biological Memorandum prepared for the project (Dudek, 2014), the Central Valley steelhead (*Oncorhynchus irideus*) fish species could potentially be affected by effluent from the project that flows into Auburn Ravine Creek. Surveys by CDFW in recent years have detected steelhead in this portion of Auburn Ravine Creek. However, actual spawning locations and the size of the population in this creek is unknown (Dudek, 2014). Regardless, the quality and quantity of the effluent from the WWTP will not change due to project improvements; therefore the project would not have an impact on this species or its habitat (Dudek, 2014). The permitted capacity of the WWTP is an annual dry weather average of 1.67 million gallon per day (mgd), although current discharge is well below that amount, primarily due to the drought conditions.

The area of disturbance associated with the proposed project improvements would be entirely within the existing WWTP footprint. The project would result in **no impacts**

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related to interference with the movement of wildlife or migratory wildlife corridors, nor would it impede the use of native wildlife nursery sites.

- e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

One ornamental pine may need to be removed before installation of new piping through the project site. Native trees are protected under the Auburn Municipal Code (Title XV, Chapter 161). As a public works project involving a non-native ornamental tree, this potential removal would not be subject to provisions of the ordinance. Therefore, the project would not conflict with applicable policies or ordinances protecting biological resources and **no impact** would occur.

- f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

There is no adopted habitat conservation plan that could conflict with the proposed project. Placer County is considering adoption of the Placer County Conservation Plan, a Habitat Conservation Plan (HCP) under the Federal Endangered Species Act and a Natural Community Conservation Plan (NCCP) under the California Natural Community Conservation Planning Act. The PCCP would cover approximately 201,000 acres of Western Placer County, including the WWTP project area (Placer County, 2014). A Draft PCCP was circulated three years ago, but has not been adopted. Even if the PCCP were adopted prior to implementation of the proposed project, the project (as an ongoing municipal use within the City of Auburn) would not conflict with the PCCP. Therefore, **no impact** would occur.

Mitigation Measures

- BIO-1** A nesting bird survey shall be conducted 30 days prior to the onset of any construction activity occurring within the nesting period (February 15-August 31). If nesting birds are detected during surveys, a qualified biologist shall be retained to determine an appropriate buffer depending on construction activities, nest location and species. If necessary, consultation with CDFW will be sought. A worker Environmental Awareness Training may be provided to workers with information regarding the possibility of nesting birds on the project site and the course of action to take should a nest be encountered during construction.

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3.5 Cultural Resources

A cultural resources inventory of the proposed project site was conducted by Dudek archeologists in November 2014. Results of the inventory are documented in the letter report included as Appendix C and summarized below. The project area of potential effect (APE) for the cultural resources inventory consists of the existing City of Auburn WWTP boundary. The cultural resources investigation was conducted by Dudek in accordance with the standards and guidelines defined under CEQA and Section 106 of the National Historic Preservation Act (NHPA). The inventory included a North Central Information Center (NCIC) records search and review of previous technical studies for the treatment facility area.

Records Search

Staff of the North Central Information Center (NCIC) conducted a records search for the project area and a one-half mile radius surrounding the project area. Fifteen previous cultural resource studies have been conducted within a half mile of the project area, six of which have included at least a portion of the area of potential effect (APE) (Table 3.5-1), such that the project APE has been previously inventoried. An Environmental Impact Report (EIR) was prepared in 2013 for Midwestern Placer Regional Sewer Project (SCH #2012052083), which includes the project area. Preparation of this document required supporting cultural technical investigations, including intensive pedestrian survey of the project area and other inventory-level efforts.

Table 3.5-1
Previous Cultural Resource Investigations

Report No.	Year	Title	Author
50	1982	A Cultural Resource Survey of the Wise Powerhouse Unit II Project Area. Final Report	Ramsey, Eleanor Mason and Brenda J. Butler
2602	1999	Archaeological Survey Report Wise Road at North Ravine Bridge Replacement Project, Placer County, California	Windmiller, Ric
2603	1999	Historic Property Survey Report Wise Road at North Ravine Bridge Replacement Project, Placer County, California	Windmiller, Ric
4066	1992	Archaeological Reconnaissance of the 70 Acre Auburn Wastewater Treatment Facility	Farber, Alfred
10546	2009	Cultural Resources Study for the Placer County Water Agency South Canal Intake Project, Placer County, California	Haley, Katherine and Gabriel Roark
10561	2011	Cultural Resources Inventory/Evaluation Report with a Finding of Effect of Pacific Gas and Electric Company's Drum-Spaulding Project (FERC Project No. 2310) FERC Boundary Changes, Nevada and Placer Counties, California	Manlery, Mary, HDR and DTA

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One previously recorded cultural resource (P-31-003050) was identified within the project APE; however, 21 archaeological sites are also recorded within the one-half mile record search radius. These 21 resources all consist of historical-era mines, water conveyances and other historic features; none of which have associated cultural deposits. Resource P-31-003050, consisting of a historical-era “South Canal”, intersects the eastern portion of the APE. This resource would not be impacted or otherwise modified by project activities (Dudek, 2014a).

NAHC Sacred Lands File Search

On June 26, 2012, the State of California Native American Heritage Commission (NAHC) reviewed the Sacred Lands file for information on Native American cultural resources on the WWTP lands (as part of the Midwestern Placer Regional Sewer Project). On August 9, 2012, the NAHC responded stating that a search of the sacred land file failed to indicate the presence of Native American cultural resources in the proposed Midwestern Placer Regional Sewer Project area. An additional request to the NAHC was sent on August 24, 2012 for the newly added Turkey Creek preferred common pipeline alignment. On August 28, 2012, the NAHC responded stating that a search of the sacred land file failed to indicate the presence of Native American cultural resources in the proposed Regional Project area (Dudek, 2014a).

Tribal Outreach

In their responses, the NAHC also included a list of Native American individuals/organizations that may have knowledge of cultural resources in the proposed Regional Project area. Letters to these Native American individuals/organizations were sent on August 24, 2012. Contacts included the UAIC of the Auburn Rancheria, the Shingle Springs Band of Miwok Indians, the Colfax-Todds Valley Consolidated Tribe, and two individuals: Rose Enos (Maidu/Washoe) and April Wallace Moore (Nisenan). During the Notice of Preparation process for the proposed Regional Sewer Project EIR, a comment letter from the UAIC was received on June 21, 2012. The UAIC letter requested further consultation and involvement with the proposed Regional Project. After contacting her by letter in August, Ms. Moore reported that the Turkey Creek area is very sensitive for Native American cultural resources and asked to be informed if any such resources are discovered there. She also requested copies of the final cultural resource reports and a copy of the draft EIR. A letter dated September 19, 2012, from Daniel Fonseca from the Shingle Springs Band of Miwok Indians stated that the Shingle Springs Band of Miwok Indians was not aware of any known cultural resources in the proposed Regional Project APE. Mr. Fonseca requested copies of any Cultural Resource Reports and CEQA documents completed for the proposed Regional Project. Lastly, if any human remains are found during Project construction activities, Mr. Fonseca asked that he be notified and consulted (Dudek, 2014a).

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Regulatory Framework

National Historic Preservation Act

The National Historic Preservation Act (NHPA) established the National Register of Historic Places (NRHP) and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers (SHPOs) to carry out some of the functions of the NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the NHPA directs that "[t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP." Section 106 also affords the ACHP a reasonable opportunity to comment on the undertaking (Dudek 2014a citing 16 USC 470f).

36 Code of Federal Regulations, Part 800 (36 CFR 800) implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources with important cultural values; to determine whether or not they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating the adverse effects (Dudek, 2014a).

The content of 36 CFR 60.4 defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historic significance in consultation with the California SHPO to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association. The criteria for determining eligibility are essentially the same in content and order as those outlined under CEQA, but the criteria under NHPA are labeled A through D (rather than 1-4 under CEQA).

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Regarding criteria A through D of Section 106, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, cultural resources, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

- A. Are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. Are associated with the lives of persons significant in our past; or
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded or may be likely to yield, information important in prehistory or history [36 CFR 60.4].

California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as “any object, building, structure, site, area, or place, which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (Dudek, 2014a citing Division I, Public Resources Code, Section 5021.1(b)).

Lead agencies have a responsibility to evaluate historical resources against the California Register criteria prior to making a finding as to a proposed project’s impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource’s significance.

The California Register is used in the consideration of historic resources relative to significance for purposes of CEQA. The California Register includes resources listed in, or formally determined eligible for some California State Landmarks and Points of Historical Interest.

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Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory may be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Dudek, 2014a citing Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) consisting of the following:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

According to CEQA (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) and NHPA (36 CFR 60.4), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect (adverse effect) on the environment and the cultural resource itself. A substantial adverse change in the significance of an historical resource would be constituted by physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. Significance, under these management conditions, is to be interpreted in terms of the resource’s eligibility for listing on the NRHP and/or CRHR (Dudek, 2014a).

The project APE consists of the existing WWTP boundary. The vertical APE consists of less than approximately 10 feet of subsurface disturbance. Resource P-31-003050, consisting of a historical-era “South Canal”, intersects the eastern portion of the APE. This resource would not be affected or otherwise modified by planned project activities (Dudek, 2014a). Therefore, there would be no impact to historic resources as a result of the implementation of the proposed project activities.

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- b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

The cultural resources investigation of the WWTP project area indicates that there is very low potential for the inadvertent discovery of cultural resources during project construction activities. However, to ensure impacts to inadvertently discovered archaeological resources remains less than significant, the project shall implement Mitigation Measure CUL-1. Should cultural resources be identified during earth moving activities, Mitigation Measure CUL-1 would require the project to temporarily halt construction and initiate consultation with the City. Mitigation Measure CUL-1 would further require a qualified archaeologist to review and evaluate any unanticipated finds. With implementation of Mitigation Measure CUL-1, potential impacts to cultural resources would remain **less than significant**.

- c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

There are no known unique paleontological or geologic features within the project boundaries (Dudek, 2014a). However, to ensure impacts to inadvertently discovered paleontological or geologic features remains less than significant, the project would be required to implement Mitigation Measure CUL-1, as discussed in item (b) above. Implementation of Mitigation Measure CUL-1 would ensure potential impacts to those resources remains **less than significant**.

- d) Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Given that the project area consists of previously developed areas, the potential for disturbance of human remains is considered very low (Dudek, 2014a). However, to ensure impacts to inadvertently discovered human remains are less than significant, the project would be required to implement Mitigation Measure CUL-1, as discussed in item (b) above. Implementation of Mitigation Measure CUL-1 would ensure potential impacts to inadvertently discovered human remains would be **less than significant**.

Mitigation Measures

- CUL-1** Should archaeological material be identified in the area during earth moving activities, work should be temporary halted, and the City consulted. A qualified archaeologist will be assigned to review the unanticipated find, and evaluation efforts of this resource for CRHR listing will be initiated in consultation with the

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City. Should human remains be discovered, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to the City and County Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.

3.6 Geology and Soils

a) *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

The WWTP and surrounding area is considered to have low seismic risk in terms of fault hazard, seismic ground shaking, and liquefaction based on review of the California Department of Conservation Geological Survey mapping of California 2010 Fault Activity and Earthquake Fault Zones (CDC, 2010 and CDC, 2014). There are no known landslides near the WWTP. The project improvements would be constructed in accordance with the requirements of the Uniform Building Code. Therefore, the potential project impact related to an increased exposure of persons to geologic hazards would be **less than significant**.

ii) *Strong seismic ground shaking?*

According to the California Department of Conservation map showing earthquake shaking potential for California, the project site is within an area classified as having the lowest level of earthquake hazard. The lowest level of earthquake hazard classification describes areas that are distant from known, active faults and will experience lower levels of shaking less frequently (CDC, 2003). Accordingly, potential impacts related to strong seismic ground shaking at the project site would be **less than significant**.

iii) *Seismic-related ground failure, including liquefaction?*

Due to the low seismic risk, described above, the project site is not at a significant risk of ground failure and this impact is **less than significant**.

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iv) Landslides?

Based on review of California Department of Conservation records, the project area is within an area of low landslide susceptibility (CDC, 2011). Based on the low landslide susceptibility and the generally flat topography of the site, impacts related to landslides would be **less than significant**.

b) Would the project result in substantial soil erosion or the loss of topsoil?

As the project construction would primarily occur within an existing pond (which would be dry during construction), the risk of erosion is low. In addition, standard construction site stormwater protection measures (consistent with the City's Grading, Erosion and Sediment Control Ordinance) would address erosion. This impact is considered **less than significant**.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The project is not located on soil or geologic unit that is unstable or otherwise identified as presenting a risk of liquefaction or other failure based on the soils report from the United States Department of Agriculture's Natural Resources Conservation Service Web Soil Survey (USDA, 2014). One soil type is found within the project site: Andregg coarse sandy loam, 2% to 9% slopes. Andregg coarse sandy loam, 2% to 9% slopes soils are well-drained and the runoff class is low (USDA, 2014). In addition, as discussed in item (a) above, risks associated with seismic activity and landslides are considered low. Because the proposed improvements would be constructed entirely within the existing WWTP footprint on previously disturb land, there would be **no impacts** expected to result from the unstable geologic units or soils.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Based on the aforementioned USDA soils report, the soil in the project area is not expansive; therefore the project would not create substantial risk to life or property (USDA, 2014). Compliance with building code standards and design per City specifications will address any potential hazards. **No impact** would occur.

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- e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

The project involves upgrades to the City's existing WWTP. The project does not include alternative wastewater disposal systems or septic tanks. **No impact** would occur.

3.7 Greenhouse Gas Emissions

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Global climate change is a cumulative impact; a project participates in the potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gas (GHGs). Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008).

Neither the State of California nor Placer County has established CEQA significance thresholds for GHG emissions. The Governor's Office of Planning and Research (OPR) advises, "Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR, 2008). Furthermore, the OPR advisory indicates, "In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR, 2008). In addition, CEQA Guidelines Section 15064.4, state that a lead agency has discretion in determining the most appropriate method for assessing the significance of impacts from GHG emissions. Therefore, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations.

The CEQA Guidelines with respect to GHG emissions state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. Section 15064.4(a) further notes that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards." Section 15064.4(b) provides that the lead agency should

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consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent a project may increase or reduce GHG emissions as compared to the environmental setting
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Thus, in accordance with the first criterion, if the proposed project would result in a net decrease in GHG emission during operation compared to the environmental setting (i.e., existing conditions), it would not result in a significant impact related to global climate change. The construction GHG emissions from the proposed project in the analysis below are not applied to a specific significance threshold; however, this analysis does quantify the maximum annual and total GHG emissions from construction of the proposed project for disclosure purposes.

Construction GHG Emissions

Construction of the proposed project would result in GHG emissions that are primarily associated with the use of construction equipment as well as the operation of worker vehicles and haul trucks. As previously stated in Section 3.3, Air Quality, the proposed WWTP improvements would include construction of a new oxidation ditch and associated facilities. Following the assumptions in Section 3.3, Air Quality, and utilizing the calculations from the City of Woodland Water Pollution Control Facility project, estimates for construction-related greenhouse gas emissions are included in Table 3.7-1, Proposed Project Estimated Construction Greenhouse Gas Emissions. Estimates include emissions from on-site (off-road equipment) and off-site (on-road haul trucks, delivery trucks, and worker vehicles) sources during construction of the proposed project.

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Table 3.7-1
Proposed Project Estimated Construction Greenhouse Gas Emissions

	MT CO ₂	MT CH ₄	MT N ₂ O	MT CO ₂ E
Oxidation Ditch	18.73	0.01	0.00	18.84
Equipment Upgrades	79.29	0.02	0.00	79.70
Proposed Project Total	492.78	0.14	0.00	495.52

Note: MT CO₂ = metric tons carbon dioxide; MT CH₄ = metric tons methane; MT N₂O = metric tons nitrous oxide; MT CO₂E = metric tons carbon dioxide equivalent

Source: City of Woodland, Initial Study and Mitigated Negative Declaration for the 2014 WPCF Improvements and Water/Wastewater Line Repairs (SCH# 2014012009), February 2014.

As shown in Table 3.7-1, the total estimated construction GHG emissions would be approximately 496 MT CO₂E.

Operational GHG Emissions

The proposed project would involve the operation of a new oxidation ditch at the WWTP. The proposed project is not expected to increase the number of operators at the WWTP or generate additional vehicle trips during operation. The new system would both nitrify (convert organic nitrogen to nitrate) and denitrify (convert nitrate to nitrogen gas). In addition to reducing nitrogen levels in the effluent, the project would reduce power consumption. The new aerators will be about 25% more efficient than the existing aerators. Therefore, the proposed project decrease GHG emissions compared to existing conditions, and impacts would be **less than significant**.

b) *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The Climate Change Scoping Plan, approved by CARB on December 12, 2008, provides an outline for actions to reduce California's GHG emissions. The Scoping Plan provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Moreover, the Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects ... because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA, 2009). There are several federal and state regulatory measures aimed at the identification and reduction of GHG emissions; most of these measures focus on area source emissions (e.g., energy usage)

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and changes to the vehicle fleet (increased use of hybrid, electric, and more fuel-efficient vehicles). While federal and state legislation would ultimately reduce GHG emissions associated with the project, no specific plan, policy, or regulation would be directly applicable to the proposed project.

To date, the City of Auburn has not adopted a Climate Action Plan or GHG reduction plan. No local mandatory GHG regulations, plans, or policies would apply to implementation of the proposed project, and no conflict would occur. Therefore, impacts from a potential conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be **less than significant**.

3.8 Hazards and Hazardous Materials

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

The WWTP process currently uses lime (calcium hydroxide) to maintain pH balance in the wastewater. Calcium hydroxide is considered a hazardous substance. It is handled by trained WWTP operators in accordance with applicable public health laws and regulations. As part of the process upgrade, magnesium hydroxide would be used in place of the lime. Unlike calcium hydroxide, magnesium hydroxide is not listed by the State of California as a hazardous substance. Potential hazard to the public or environment through the routine use of hazardous materials would decrease as a result of the project.

Temporary construction activities associated with the project may involve the transport and use of limited quantities of miscellaneous hazardous substances including gasoline, diesel fuel, hydraulic fluid, solvents, oils, and paints. These materials would be brought onto the site and transported along Ophir Road. Due to federal and state laws and the regulations governing the handling, storage and transport of hazardous materials, as well as the mechanisms in place to respond and clean up any spills along local and regional roadways, the potential for impacts related to hazardous materials transport, use, or disposal would be considered **less than significant**.

b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Temporary construction activities associated with the project may involve the transport and use of hazardous materials including gasoline, diesel fuel, hydraulic fluid, solvents, oils, paints. These materials would be handled by the construction contractors in

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accordance with all applicable laws and regulations. Any spills would be immediately cleaned up and disposed of in the appropriate manner. The project site is not listed by any federal, state or local database that identifies known hazardous materials sites (DTSC, 2014). This impact is considered **less than significant**.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

There are no existing or proposed schools within a one-quarter mile of the proposed project. Ophir Elementary School is approximately 0.9 mile northwest of the WWTP property. The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste. Therefore, **no impacts** related to potential emissions within one-quarter mile of a school would occur.

- d) *Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

The project site is not listed by the California Department of Toxic Substances Control (DTSC) or the United States Environmental Protection Agency (EPA) as a hazardous materials site (DTSC, 2014 and EPA, 2014). Due to the nature of the project, it would not be expected to create a hazard to the public or the environment. **No impact** would occur.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

The project area is not within an adopted airport land use plan or within two miles of a public airport. The nearest public use airport is the Auburn Municipal Airport, located approximately 8.3 miles from the project site. The project area is not within the Area of Influence for this airport (PCTPA, 2014). Therefore **no impact** would occur.

- f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

The project is not located within two miles of a public or private airport, based on a review of area maps and the Auburn Municipal Airport Compatibility Map published by the Placer County Transportation Planning Agency (PCTPA, 2014). The project would

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not create a safety hazard for people residing or working in the project area. Therefore, **no impact** would occur.

- g) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Access for all fire and police emergency response vehicles would be maintained on Ophir Road and in the immediate project area throughout the construction period. No off-site road closures are necessary as part of the project. Therefore, there would be **no impact** on emergency fire and police response.

- h) *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

As shown on Figure IX-1 of the City of Auburn General Plan, the project site is located in an area rated as extreme severity for fire hazard (City of Auburn, 1993). The nearest fire station is located in Auburn at 226 Sacramento St, approximately 10 minutes from the project site.

No construction would occur within the Auburn Ravine riparian corridor or adjacent woodland areas. Equipment used during construction activities could potentially generate sparks that ignite dry vegetation on or adjacent to the construction area. However, all of the construction would occur within the developed WWTP site on primarily flat areas of asphalt or annual grass, minimizing the risk of fire. Thus, risk of wildland fire would be **less than significant**.

3.9 Hydrology and Water Quality

- a) *Would the project violate any water quality standards or waste discharge requirements?*

The WWTP facility holds all required federal and state permits (NPDES No. CA0077712, WDR Order No. R5-2010-0090-01 as amended by WDR Order No. R5-2011-0003). The proposed project is being implemented in order to comply with the City's renewed NPDES permit issued by the Regional Board. The proposed improvements would not adversely affect the quality of the discharge into Auburn Ravine Creek. The project process has a beneficial effect of lowering the nitrogen content of effluent. This impact is **less than significant**.

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- b) *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?*

The proposed project would not increase the demand for groundwater supplies or interfere with aquifer recharge. The WWTP improvement is not driven by population increases in the Auburn area, and no project component will contribute significantly to altering the rate of recharge. Therefore, impacts would be **less than significant**.

- c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

The project would not alter existing drainage patterns, either at the WWTP or within City rights of way. The project does not involve changing the course of a stream or river, and would not significantly alter the drainage patterns in the project vicinity. As the project construction would primarily occur within an existing pond (which would be dry during construction), the risk of erosion is low. In addition, standard construction practices site and stormwater protection measures (consistent with the City's Grading, Erosion and Sediment Control Ordinance) would be adequate to prevent significant erosion. Therefore, this impact is **less than significant**.

- d) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

The project is not expected to alter existing drainage patterns or the course of a stream or river as construction would occur within the existing WWTP footprint, primarily within an existing, dry treatment pond. No alteration of Auburn Ravine Creek would be necessary for this project. Surface runoff at the WWTP site is not expected to increase in amount or rate to the extent that flooding would occur on or off-site. Impacts would be **less than significant**.

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- e) *Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

The project upgrades would be implemented at the existing WWTP in areas of existing pavement and grass. The largest proposed structure, the new oxidation ditch, would hold water, and would be located within an existing treatment pond. The other proposed facilities, including the electrical building, would be constructed in areas consisting of pavement or compacted soils. Therefore, no significant change in runoff patterns is anticipated because of the project. During construction, compliance with standard construction site stormwater protection measures (consistent with the City's Grading, Erosion and Sediment Control Ordinance) would prevent possible polluted stormwater from entering the drainage system. The upgrades to the WWTP would not increase the pollutant load of stormwater runoff. Therefore, impacts related to runoff would be **less than significant**.

- f) *Would the project otherwise substantially degrade water quality?*

The proposed project would improve the WWTP performance and effluent water quality. Therefore, the project would result in **no impact** related to degradation of water quality.

- g) *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

The proposed project is not located within a 100-year floodplain based on a review of a Federal Emergency Management Agency (FEMA) flood map of the project vicinity (FEMA Map No. 06061C0409F; June 8, 1998). **No impact** would occur.

- h) *Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

The proposed project would not involve construction of structures within a 100-year flood hazard area. **No impact** would occur.

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- i) *Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

Flood risk to people or structures at the WWTP site is minimal. The site is located outside of the FEMA determined 500-year floodplain and there are no levees or dams in the project vicinity. **No impact** would occur.

- j) *Inundation by seiche, tsunami, or mudflow?*

The project's inland location makes the risk of tsunami negligible. The risk of seiche is also negligible as the nearest reservoir is Folsom Lake, approximately 10 miles away. There is a low risk of exposing people to significant risk of injury or death if such an event did occur given the geological context of the project site. The project is located in a relatively flat area of compacted soils away from slopes, reducing the risk of impacts from a mudslide. Therefore, this impact is considered **less than significant**.

3.10 Land Use and Planning

- a) *Would the project physically divide an established community?*

Implementation of the proposed project will not physically divide an established community because the project would be located entirely within the fence line of the existing WWTP. Therefore **no impact** would occur.

- b) *Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

The WWTP site is designated as "Industrial" in the General Plan (City of Auburn, 1993). The project is consistent with this land use.

The proposed project would improve performance and effluent quality and support future capacity for planned growth as identified in the City of Auburn's General Plan. The project would maintain existing service and would not conflict with local plans or policies. The proposed project is consistent with the goals of the Placer County General Plan and the City of Auburn General Plan regarding public service systems (Placer County, 1994 and City of Auburn, 1993). The project would not conflict with any local plans or policies and there would be **no impact** to land use.

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- c) *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?*

As previously discussed in Section 3.4, Biological Resources (Item “f” on page 34), the project would not conflict with any applicable habitat conservation plan or natural community conservation plan. Therefore, **no impact** would occur.

3.11 Mineral Resources

- a) *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

The project would not result in the loss of available known mineral resources because the project is within the existing fence line of the WWTP and the proposed facilities are located in an area previously disturbed during construction of the original treatment facilities. Therefore, **no impact** would occur.

- b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

There are no locally identified mineral resources areas on the project site based on a review of the City of Auburn and Placer County General Plan Background Report (City of Auburn, 1993 and Placer County, 1994a). **No impact** would occur.

3.12 Noise

An Environmental Noise Assessment for the proposed project was prepared by Bollard Acoustical Consultants, Inc. (BAC, 2014). This report is included in Appendix D of this Initial Study.

Acoustical Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers is a

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practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by the A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The Day-night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. Where short-term noise sources are an issue, noise impacts may be assessed in terms of maximum noise levels, hourly averages, or other statistical descriptors. See Appendix A of the Environmental Noise Assessment (Appendix D) for definitions of acoustical terminology.

Vibration Fundamentals and Terminology

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person’s perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed

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for vibration levels defined in terms of peak particle velocities. Unlike noise, vibration dissipates rapidly with distance.

Existing Noise and Vibration Environment in Project Vicinity

In the immediate project vicinity, the existing ambient noise environment is defined primarily by water flowing in the creek along the northern site boundary, distant traffic and, to a lesser extent, existing WWTP operations. The noise generation of the WWTP is quite low and was found to be audible only in the immediate vicinity of the plant equipment and processes (BAC, 2014).

To generally quantify the existing ambient noise environment in the project vicinity, a continuous (24-hour) ambient noise level measurement survey was conducted by Bollard Acoustical Consultants, Inc. at four locations surrounding the project site on Wednesday, November 5, 2014. Larson Davis Laboratories Model 820 precision integrating sound level meters were used for the noise level measurement survey. The meters were calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (BAC, 2014). Figure 6 shows the noise measurement locations.

A summary of the noise level measurement results is provided below in Table 3.12-1.

Table 3.12-1
Ambient Noise Survey Results Summary
Auburn WWTP Site Vicinity – November 5, 2014

Daytime (7 am to 10 pm)			Nighttime (10 pm - 7 am)		
Site ^A	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{dn}
1	48	56-72	49	54-70	55
2	50	57-70	49	56-70	56
3	56	60-80	56	57-73	62
4	56	60-94	53	60-80	60

^A See Figure 5 for noise measurement locations

Source: BAC, 2014

During field inspections of the immediate project area and property lines nearest the existing residential areas, no discernible vibration levels were observed. In addition, no significant vibration-generating equipment was observed to be in operation at the project site. As a result, baseline vibration levels are negligible, and below the thresholds of perception (BAC, 2014).

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Regulatory Setting

City of Auburn General Plan

The following relevant goals and policies are contained in the City of Auburn General Plan Noise Element.

Goal 1: To protect City residents from the harmful and annoying effects of exposure to excessive noise.

Policy 1.1 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 3.12-2 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. (Requirements for the content of an acoustical analysis are given by Table 3.12-3.)

Policy 2.2 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 3.12-2 as measured immediately within the property line of lands designated for noise-sensitive uses. This policy does not apply to noise sources associated with agricultural operations on lands zoned for agricultural uses.

Table 3.12-2
Noise Level Performance Standards for New Projects Affected by or
Including Non-Transportation Sources

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Average (Leq), dB	55	45
Maximum level (Lmax) dB	75	65

Note: Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

Source: BAC, 2014

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Table 3.12-3
Requirements for an Acoustical Analysis

An acoustical analysis prepared pursuant to the Noise Element shall:	
A.	Be the responsibility of the applicant.
B.	Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
C.	Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
D.	Estimate existing and projected (20 years) noise levels in terms of Ldn or CNEL and/or the standards of table VIII-1, and compare those levels to the adopted policies of the Noise Element. Noise prediction methodology must be consistent with the appendix to the Noise Element.
E.	Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
F.	Estimate noise exposure after the prescribed mitigation measures have been implemented.
G.	Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures

Source: BAC, 2014

Placer County Noise Standards

Although the project site is located within the City of Auburn, some of the surrounding properties are located outside of the City limits and would be subject to the Placer County noise standards. With one exception, the County noise standards are identical to the City's noise standards shown in Table 2. The exception is that the County applies a 70 dB Lmax noise standard during daytime hours whereas the City utilizes a 75 dB threshold.

The noise generation of the WWTP facility is primarily steady state, rather than exhibiting large fluctuations in noise levels. This is because noise generated by pumps and water flowing is fairly constant, with no large variation between average and maximum noise levels. Therefore, the noise standards that would be most applicable to this project would be the City and County average (Leq) noise standards, which are the same for both the City and the County. Compliance with the Table 2 average noise level limits would, therefore, ensure compliance with both the City and County maximum (Lmax) noise standards. As a result, this analysis focuses on compliance with the City and County average (Leq) noise standard.

Vibration Standards

The City of Auburn Noise Element does not contain specific policies pertaining to vibration levels. Nonetheless, because the CEQA Guidelines include vibration with the noise criteria, potential impacts associated with project vibration are considered in this analysis.

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Human and structural response to different vibration levels is influenced by a number of factors, including: ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.12-4 indicates that the threshold for damage to structures ranges from 2 to 6 inches per second (in/sec). Half this minimum threshold, or 1 in/sec peak vibration threshold (ppv) is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is 0.1 in/sec ppv (BAC, 2014 citing ESA, 1996).

Table 3.12-4
General Human and Structural Responses to Vibration Levels

Effects on Structures and People	Peak Vibration Threshold (in/sec PPV)
Structural damage to commercial structures	6
Structural damage to residential buildings	2
Architectural damage	1.0
General threshold of human annoyance	0.1
General threshold of human perception	0.01

Source: BAC, 2014 citing Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic, Caltrans 1976; Final Environmental Impact Report: Richmond Transport Project, Orion Environmental Associates, 1990; and Weekly Progress Report for Vibration Monitoring for Richmond Transport, Wilson, Ihrigg & Associates, 1994

- a) *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Project Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in typical construction would generate maximum noise levels, as indicated in Table 3.12-5, ranging from 70 to 90 dB at a distance of 50 feet. Construction activities are proposed to occur during normal daytime working hours.

Table 3.12-5
Typical Construction Equipment Noise

Equipment Description	Maximum Noise Level at 50 feet, dBA
Auger drill rig	85
Backhoe	80
Bar bender	80
Boring jack power unit	80
Chain saw	85

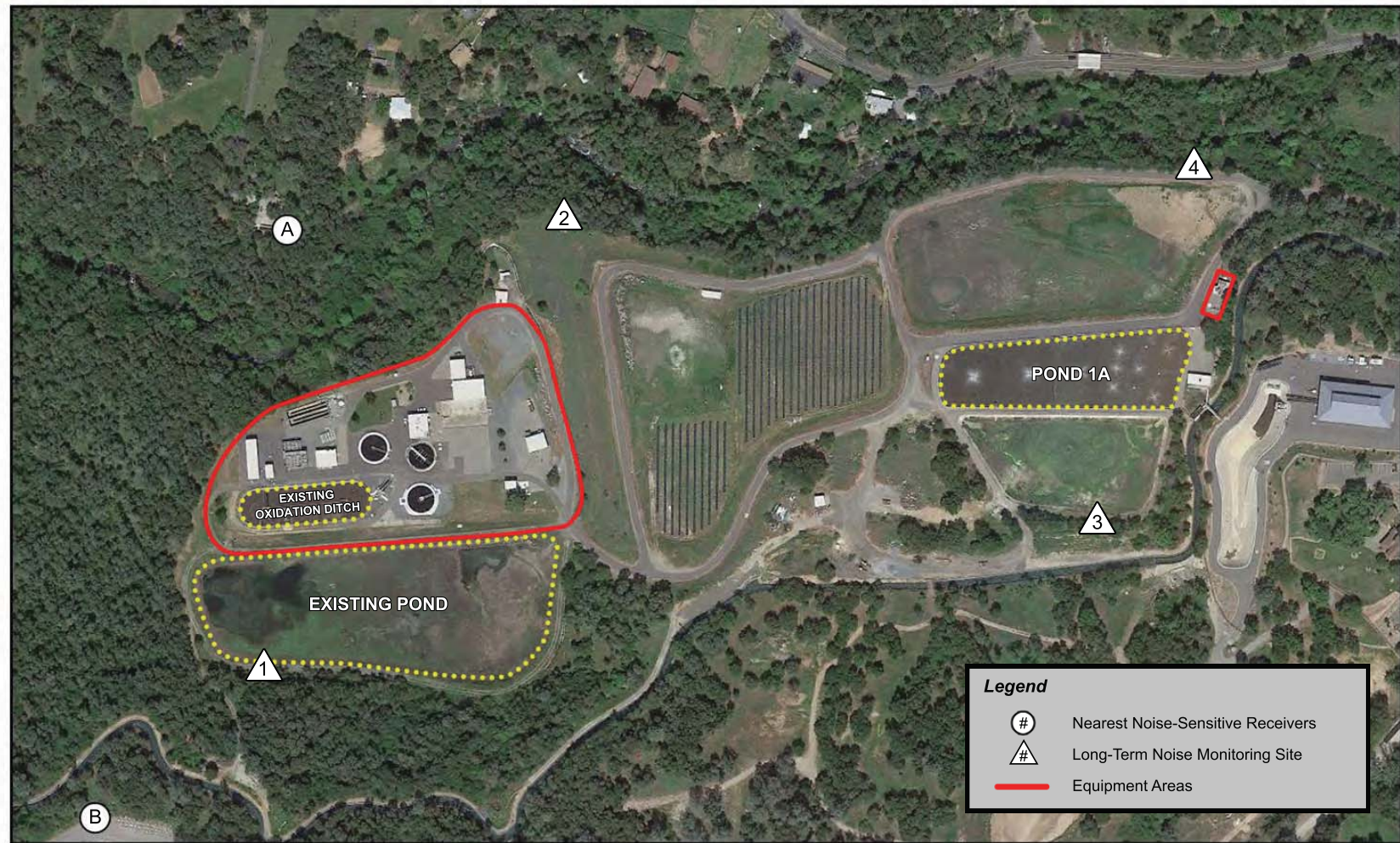
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**Table 3.12-5
Typical Construction Equipment Noise**

Equipment Description	Maximum Noise Level at 50 feet, dBA
Compactor (ground)	80
Compressor (air)	80
Concrete batch plant	83
Concrete mixer truck	85
Concrete pump truck	82
Concrete saw	90
Crane (mobile or stationary)	85
Dozer	85
Dump truck	84
Excavator	85
Flatbed truck	84
Front end loader	80
Generator (25 kilovoltamperes [kVA] or less)	70
Generator (more than 25 kVA)	82
Grader	85
Hydra break ram	90
Jackhammer	85
Mounted impact hammer (hoe ram)	90
Paver	85
Pneumatic tools	85
Pumps	77
Rock drill	85
Scraper	85
Soil mix drill rig	80
Tractor	84
Vacuum street sweeper	80
Vibratory concrete mixer	80

Source: BAC, 2014 citing Federal Highway Administration, 2006

Maximum noise levels generated during construction of the WWTP improvements are predicted to be approximately 45 to 65 dB L_{max} at the nearest residences. This range of noise levels is well below both existing ambient conditions and below the City of Auburn and Placer County daytime and nighttime noise level standards. In addition, construction noise generation would be short term and limited to daytime hours. Accordingly, noise impacts related to construction would be **less than significant**.



Scale (feet)
0 200 400



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WWTP Operational Noise

Noise measurement results of existing plant equipment were used to evaluate potential noise impacts associated with the proposed facility improvements. Specifically, BAC conducted noise level measurements of individual components of the existing facility which would reportedly be similar to components in the expanded facility on the afternoon of November 20, 2014. Those reference noise level measurements were projected from the location of the proposed equipment to the nearest potentially affected residences to the corresponding equipment.

The existing plant equipment which was reported by WWTP staff to be generally similar in terms of noise generation was the aerators, oxidation ditch, and pumps. At a reference distance of 50 feet from each of these sources, measured average noise levels ranged from 58 to 65 dB Leq. WWTP Staff also report that new aerators are rated at 72 dB at a distance of 3 feet, which is considerably quieter than existing operations. When projected to the nearest residences located between 600 and 900 feet from the proposed improvements the resulting range of average noise levels associated with the proposed expansion computes to 33-43 dB Leq. This range of noise levels does not include an adjustment for shielding by intervening topography and structures, or the fact that some of the proposed pumps would be submerged. After consideration of that shielding, ultimate plant expansion noise emissions are predicted to be below 40 dB Leq at the nearest residences.

Noise generated by the expanded WWTP operations are predicted to be 40 dB Leq or less at the nearest noise-sensitive land uses to the project site. This range of noise levels is well below both existing ambient conditions and below the City of Auburn and Placer County daytime and nighttime noise level standards. When added to existing ambient noise levels reported in Table 1, the net increase in ambient noise levels at the nearest residences is predicted to range from 0 to 1 dB, which is considered an imperceptible increase. Therefore, noise associated with project operations would be **less than significant**.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

No discernible vibration levels were observed at the site boundaries for existing WWTP operations. Because the new equipment to be installed as part of the proposed expansion would be similar to existing equipment, post-project vibration levels are similarly expected to be imperceptible at the site boundaries. This impact is considered **less than significant**.

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- c) *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

The project would not result in a permanent increase in ambient noise levels. See discussion in item (a) above. This impact would be **less than significant**.

- d) *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

The project may result in temporary noise increases due to construction. See discussion in item (a) above. This impact would be **less than significant**.

- e) *Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The project area is not within an adopted airport land use plan or within two miles of a public airport. The nearest public use airport is the Auburn Municipal Airport, located approximately 8.3 miles from the project site. Therefore, **no impact** would occur.

- f) *Would the project be within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

The project is not located within two miles of a public or private airport, based on a review of area maps and the Auburn Municipal Airport Compatibility Map published by the Placer County Transportation Planning Agency (PCTPA, 2014). The project would not create a safety hazard for people residing or working in the project area. Therefore, there would be **no impact**.

3.13 Population and Housing

- a) *Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

Although the improvements proposed to the WWTP for this project would support future capacity for planned growth as identified in the City of Auburn's General Plan, no increase in capacity would be implemented with this project. Therefore, the project would have **no impacts** related to inducing substantial population growth in the area.

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- b) *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

The project upgrades to the City's WWTP would occur entirely within the existing WWTP fence line. There are no existing housing units located on the WWTP project site. Therefore, the project would result in **no impacts** related to displaced housing.

- c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

The project involves improvements to an existing WWTP located on an industrial site in the City of Auburn. The project would not displace people or housing, nor would it necessitate the construction of replacement housing elsewhere. **No impact** would occur.

3.14 Public Services

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*

Fire protection?

The proposed project involves secondary process upgrades to the City's existing WWTP located at 10441 Ophir Road in Auburn. The project would not increase the service population or increase the risk of structure fires. The operational change from calcium hydroxide to magnesium hydroxide would not increase the risk of fire (neither material is classified as flammable). The closest fire station to the project site is the City of Auburn Fire Department Gietzen Station located at 226 Sacramento Street in Auburn, approximately 1.8 miles from the WWTP site.

The project would have **no impact** on existing performance standards for local fire departments or result in the need for new or altered fire protection facilities.

Police protection?

The project involves upgrades to the City's existing WWTP. The City of Auburn Police Department is located at 1215 Lincoln Way in Auburn, approximately 1.7 miles from the WWTP site.

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The project would have **no impact** on existing performance standards for local police or result in the need for new or altered law enforcement facilities.

Schools?

The project involves upgrades to the City's existing WWTP. There would be **no impact** on area schools.

Parks?

The project proposes upgrades to the City's existing WWTP. There would be **no impact** to area parks or recreational facilities.

Other public facilities?

This project is designed to improve the WWTP performance and effluent water quality. Therefore, the impact to public services or governmental facilities would be beneficial by improving existing system reliability. Service to the WWTP's customers would not be disrupted during project construction. Therefore, this impact would be **less than significant**.

3.15 Recreation

- a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

The project would not increase the use of existing recreational facilities nor would it require the construction of new recreational facilities. Therefore, **no impact** to parks or recreational facilities would occur.

- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?*

The project does not include construction or expansion of recreational facilities, therefore **no impact** would occur.

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3.16 Transportation and Traffic

- a) *Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

The project does not include elements (i.e. houses or other development) which would permanently increase traffic in the project vicinity. Construction activity would temporarily increase the number of vehicles and equipment entering and exiting the WWTP property and traveling on Ophir Road. However, no construction would occur in a public right of way and there is sufficient space inside the WWTP site to accommodate all construction vehicles and contractor staging. Therefore, impacts to traffic would be **less than significant**.

- b) *Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

The project would not have a long-term effect on congestion management plans or performance standards. Some minor traffic increases may occur as a result of construction, primarily at the WWTP which is accessed from a gated entrance on Ophir Road. Beyond the gated entrance from Ophir Road, there is one access road into the facility. The access road is utilized by employees and visitors to the WWTP. Both Ophir Road and the site access road are capable of accommodating the temporary project-generated construction traffic, including worker trips and equipment and material deliveries. The impact would be **less than significant**.

- c) *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

The project proposes treatment improvements for a WWTP. The project would not affect air traffic. **No impact** related to a change in air traffic patterns would occur as a result of the project.

Auburn Wastewater Treatment Plant Secondary Process Upgrade Initial Study and Mitigated Negative Declaration

- d) *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

The proposed project involves treatment improvements to the City's existing WWTP. The project would result in **no impact** due to increased hazards resulting from design features or incompatible uses.

- e) *Would the project result in inadequate emergency access?*

Access to the WWTP is provided at a gated entrance on Ophir Road. Access to the WWTP site would not be affected by the project as no streets would be blocked or closed during project construction. Therefore, **no impact** would occur.

- f) *Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

The proposed project includes treatment improvements to the City's WWTP. There are no alternative transportation services or facilities on or near the project site. The project would have **no impact** related to conflicts with policies, plans, or programs regarding transit, bicycle, or pedestrian facilities.

3.17 Utilities and Service Systems

- a) *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

The WWTP is permitted by the Regional Water Quality Control Board ((NPDES No. CA0077712, WDR Order No. R5-2010-0090-01 as amended by WDR Order No. R5-2011-0003). The WWTP improvement project would improve the efficiency of wastewater treatment. The project would improve performance and effluent quality at the WWTP and comply with anticipated future criteria for water quality. No increase in wastewater discharge quantity would be generated by the project. Therefore, a **less than significant** impact would occur.

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- b) *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The proposed project would include construction of a new oxidation ditch within one of the existing WWTP treatment ponds and installation of new mechanical fine screens, a new alkalinity feed system, a new return sludge pump station, and additional piping within the existing facility. The effects of these activities are analyzed in this initial study and mitigation measures have been included, as necessary, to reduce environmental impacts to less than significant levels. Accordingly, impacts resulting from proposed project construction and improvements at the WWTP would be **less than significant**.

- c) *Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The proposed project would not result in a significant increase in the amount of impervious areas in the project vicinity and would therefore not require additional storm drainage capacity or facilities. The impact is determined **less than significant**.

- d) *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

The project would not increase demand for water. The WWTP would not require additional water supplies for its operation after the project is completed. Construction would require the temporary use of water by watering trucks and equipment for the implementation of dust control measures. Impacts to water entitlements would be **less than significant**.

- e) *Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

The proposed WWTP improvement project would not affect the demand for wastewater treatment in Auburn. Therefore, **no impact** would occur.

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- f) *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Therefore, this impact would be **less than significant**.

- g) *Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

The project will comply with applicable governmental statutes and regulations, rendering the impact to solid waste statutes and regulations **less than significant**.

3.18 Mandatory Findings of Significance

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?*

The project site does not provide substantial habitat for wildlife, nesting birds, or fish, and does not support any sensitive natural vegetation communities. The proposed WWTP project upgrades would not reduce habitat for fish or wildlife species, threaten to eliminate a plant or animal community, or adversely affect rare or endangered species. Implementation of Mitigation Measure BIO-1, which would require a nesting bird survey 30 days prior to the onset of any construction activity occurring within the nesting period (February 15-August 31), would ensure that nesting birds would not be interrupted by construction activity. There have been no important historic or prehistoric resources identified on the project site. However to ensure the project does not impact or eliminate important cultural resources, Mitigation Measure CUL-1 would be implemented.

Implementation of Mitigation Measures BIO-1 and CUL-1 would ensure that the project's impacts to biological and cultural resources remain **less than significant**.

Auburn Wastewater Treatment Plant Secondary Process Upgrade Initial Study and Mitigated Negative Declaration

- b) *Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?*

The project has long-term environmental benefits, while the impacts are primarily short-term (construction). This impact is considered **less than significant**.

- c) *Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

The project effects are primarily short-term, related to construction. No other major utility project would interact with the proposed project. The potential for cumulative impacts is **less than significant**.

- d) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

The project would not have an adverse effect on human beings, per this initial study. This impact is **less than significant**.

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4 REFERENCES AND PREPARERS

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4.2 List of Preparers

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Kaitlin Roberts, Environmental Specialist

Persons Consulted

Reg Murray, City of Auburn Planning & Public Works Department

Dan Rich, NexGen Utilities

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APPENDIX A

Air Quality

MLE Construction

Yolo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.70	2,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	54
Climate Zone	2			Operational Year	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Single pond acreage and estimated blow building plus internal piping acreage. Concrete removal square footage per pond.

Construction Phase - Blower Building Construction

Off-road Equipment -

Off-road Equipment - 0.26 acre pad

Off-road Equipment - 0.26 acre pad

Off-road Equipment - 0.26 acre pad

Off-road Equipment - internal piping of blower building pumps to pond

Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Off-road Equipment - internal piping of blower building pumps to pond

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Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Off-road Equipment - internal piping of blower building pumps to pond

Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Off-road Equipment - internal piping of blower building pumps to pond

Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Grading -

Demolition -

Trips and VMT - vendor trips for material delivery, haul trip for demolition material removal

Area Coating -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
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tblConstructionPhase	PhaseEndDate	4/7/2015	4/20/2015
tblConstructionPhase	PhaseEndDate	6/29/2015	7/10/2015
tblConstructionPhase	PhaseStartDate	1/1/2015	1/14/2015
tblConstructionPhase	PhaseStartDate	3/25/2015	4/7/2015
tblConstructionPhase	PhaseStartDate	6/16/2015	6/29/2015
tblConstructionPhase	PhaseStartDate	7/11/2015	7/13/2015
tblConstructionPhase	PhaseStartDate	7/25/2015	7/27/2015
tblLandUse	LandUseSquareFeet	0.00	2,000.00
tblLandUse	LotAcreage	0.00	0.70
tblOffRoadEquipment	HorsePower	81.00	16.00

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tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	HorsePower	81.00	16.00
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tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
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tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment

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tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
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tblOffRoadEquipment	PhaseName		Pond 1 Demo

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tblOffRoadEquipment	PhaseName		Pond 1 MLE Construction
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tblOffRoadEquipment	PhaseName		Internal Piping to Pond 2
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tblOffRoadEquipment	UsageHours	4.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00

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tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
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tblTripsAndVMT	PhaseName		Internal Piping to Pond 2
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.0517	0.3502	0.2397	3.4000e-004	0.3848	0.0231	0.4078	0.0394	0.0214	0.0607	0.0000	31.8113	31.8113	7.6800e-003	0.0000	31.9726
2015	0.0517	0.4912	0.3486	5.2000e-004	0.6151	0.0309	0.6459	0.0624	0.0284	0.0908	0.0000	47.4782	47.4782	0.0119	0.0000	47.7276
Total	0.1034	0.8414	0.5883	8.6000e-004	0.9998	0.0539	1.0538	0.1018	0.0498	0.1516	0.0000	79.2895	79.2895	0.0196	0.0000	79.7002

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.0517	0.3062	0.2397	3.4000e-004	4.9100e-003	0.0231	0.0280	1.4600e-003	0.0214	0.0228	0.0000	31.8112	31.8112	7.6800e-003	0.0000	31.9726
2015	0.0517	0.3646	0.3486	5.2000e-004	6.6300e-003	0.0309	0.0375	1.6900e-003	0.0284	0.0301	0.0000	47.4781	47.4781	0.0119	0.0000	47.7276
Total	0.1034	0.6708	0.5883	8.6000e-004	0.0115	0.0539	0.0655	3.1500e-003	0.0498	0.0530	0.0000	79.2894	79.2894	0.0196	0.0000	79.7002

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	20.28	0.00	0.00	98.85	0.00	93.79	96.90	0.00	65.06	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Blower Building Site Prep	Site Preparation	8/25/2014	8/25/2014	5	1	
2	Blower Building Grading	Grading	8/26/2014	8/27/2014	5	2	
3	Blower Building Pad	Paving	8/28/2014	9/3/2014	5	5	
4	Blower Building Construction	Building Construction	9/4/2014	10/15/2014	5	30	
5	Blower Building Arch. Coat.	Architectural Coating	10/16/2014	10/22/2014	5	5	
6	Internal Piping to Pond 1	Trenching	10/23/2014	11/5/2014	5	10	
7	Pond 1 Demo	Demolition	11/6/2014	11/19/2014	5	10	
8	Pond 1 MLE Construction	Building Construction	11/20/2014	12/31/2014	5	30	
9	Internal Piping to Pond 2	Trenching	1/14/2015	1/27/2015	5	10	
10	Pond 2 Demo	Demolition	1/28/2015	2/10/2015	5	10	
11	Pond 2 MLE Construction	Building Construction	2/11/2015	3/24/2015	5	30	
12	Internal Piping to Pond 3	Trenching	4/7/2015	4/20/2015	5	10	
13	Pond 3 Demo	Demolition	4/21/2015	5/4/2015	5	10	
14	Pond 3 MLE Construction	Building Construction	5/5/2015	6/15/2015	5	30	
15	Internal Piping to Pond 4	Trenching	6/29/2015	7/10/2015	5	10	
16	Pond 4 Demo	Demolition	7/13/2015	7/24/2015	5	10	
17	Pond 4 MLE Construction	Building Construction	7/27/2015	9/4/2015	5	30	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,000; Non-Residential Outdoor: 1,000 (Architectural Coating –****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Internal Piping to Pond 3	Excavators	1	8.00	162	0.38
Internal Piping to Pond 3	Concrete/Industrial Saws	1	1.00	16	0.73

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Internal Piping to Pond 3	Paving Equipment	1	1.00	130	0.36
Internal Piping to Pond 3	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 3 Demo	Cranes	1	2.00	226	0.29
Pond 3 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 3 MLE Construction	Paving Equipment	1	2.00	130	0.36
Internal Piping to Pond 4	Excavators	1	8.00	162	0.38
Internal Piping to Pond 4	Concrete/Industrial Saws	1	1.00	16	0.73
Internal Piping to Pond 4	Paving Equipment	1	1.00	130	0.36
Internal Piping to Pond 4	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 4 Demo	Cranes	1	2.00	226	0.29
Pond 4 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 4 MLE Construction	Paving Equipment	1	2.00	130	0.36
Blower Building Arch. Coat.	Air Compressors	1	4.00	78	0.48
Blower Building Pad	Cement and Mortar Mixers	1	6.00	9	0.56
Pond 2 Demo	Concrete/Industrial Saws	1	4.00	16	0.73
Blower Building Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Blower Building Construction	Cranes	1	2.00	226	0.29
Blower Building Construction	Forklifts	1	6.00	89	0.20
Blower Building Site Prep	Graders	1	8.00	174	0.41
Blower Building Pad	Pavers	1	7.00	125	0.42
Blower Building Pad	Rollers	1	7.00	80	0.38
Pond 3 Demo	Concrete/Industrial Saws	1	4.00	16	0.73
Blower Building Grading	Rubber Tired Dozers	1	1.00	255	0.40
Blower Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pond 4 Demo	Concrete/Industrial Saws	1	4.00	16	0.73
Blower Building Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Blower Building Pad	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Blower Building Site Prep	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pond 1 Demo	Concrete/Industrial Saws	1	4.00	81	0.73
Pond 2 MLE Construction	Cranes	1	1.00	226	0.29

Appendix A

Pond 3 MLE Construction	Cranes	1	1.00	226	0.29
Pond 4 MLE Construction	Cranes	1	1.00	226	0.29
Pond 1 MLE Construction	Cranes	1	1.00	226	0.29
Pond 2 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 3 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 4 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 1 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 2 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 1 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 2 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 3 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 4 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 1 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 2 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 3 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 4 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 1 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Internal Piping to Pond 1	Excavators	1	8.00	162	0.38
Internal Piping to Pond 1	Concrete/Industrial Saws	1	1.00	16	0.73
Internal Piping to Pond 1	Paving Equipment	1	1.00	130	0.36
Internal Piping to Pond 1	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 1 Demo	Cranes	1	2.00	226	0.29
Pond 1 MLE Construction	Paving Equipment	1	2.00	130	0.36
Internal Piping to Pond 2	Excavators	1	8.00	162	0.38
Internal Piping to Pond 2	Concrete/Industrial Saws	1	1.00	16	0.73
Internal Piping to Pond 2	Paving Equipment	1	1.00	130	0.36
Internal Piping to Pond 2	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 2 Demo	Cranes	1	2.00	226	0.29
Pond 2 MLE Construction	Paving Equipment	1	2.00	130	0.36

Trips and VMT

Appendix A

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pond 2 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Site Prep	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Pad	7	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Arch. Coat	1	2.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 3 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 4 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 1 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 2 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 3 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 4 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 1 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 3	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 4	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 1	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 2	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Blower Building Site Prep - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Off-Road	7.2000e-004	7.2400e-003	3.7000e-003	0.0000		4.5000e-004	4.5000e-004		4.1000e-004	4.1000e-004	0.0000	0.4514	0.4514	1.3000e-004	0.0000	0.4542
Total	7.2000e-004	7.2400e-003	3.7000e-003	0.0000	2.7000e-004	4.5000e-004	7.2000e-004	3.0000e-005	4.1000e-004	4.4000e-004	0.0000	0.4514	0.4514	1.3000e-004	0.0000	0.4542

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.4000e-004	0.0000	2.0500e-003	0.0000	2.0500e-003	2.1000e-004	0.0000	2.1000e-004	0.0000	0.0190	0.0190	0.0000	0.0000	0.0190
Total	1.0000e-005	1.0000e-005	1.4000e-004	0.0000	2.0500e-003	0.0000	2.0500e-003	2.1000e-004	0.0000	2.1000e-004	0.0000	0.0190	0.0190	0.0000	0.0000	0.0190

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2000e-004	7.2400e-003	3.7000e-003	0.0000		4.5000e-004	4.5000e-004		4.1000e-004	4.1000e-004	0.0000	0.4514	0.4514	1.3000e-004	0.0000	0.4542
Total	7.2000e-004	7.2400e-003	3.7000e-003	0.0000	2.7000e-004	4.5000e-004	7.2000e-004	3.0000e-005	4.1000e-004	4.4000e-004	0.0000	0.4514	0.4514	1.3000e-004	0.0000	0.4542

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.4000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0190	0.0190	0.0000	0.0000	0.0190
Total	1.0000e-005	1.0000e-005	1.4000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0190	0.0190	0.0000	0.0000	0.0190

3.3 Blower Building Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0125	8.8500e-003	1.0000e-005		9.3000e-004	9.3000e-004		8.9000e-004	8.9000e-004	0.0000	1.0952	1.0952	2.3000e-004	0.0000	1.1000
Total	1.4900e-003	0.0125	8.8500e-003	1.0000e-005	7.5000e-004	9.3000e-004	1.6800e-003	4.1000e-004	8.9000e-004	1.3000e-003	0.0000	1.0952	1.0952	2.3000e-004	0.0000	1.1000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	6.0000e-005	5.6000e-004	0.0000	8.2000e-003	0.0000	8.2000e-003	8.3000e-004	0.0000	8.3000e-004	0.0000	0.0760	0.0760	0.0000	0.0000	0.0761
Total	4.0000e-005	6.0000e-005	5.6000e-004	0.0000	8.2000e-003	0.0000	8.2000e-003	8.3000e-004	0.0000	8.3000e-004	0.0000	0.0760	0.0760	0.0000	0.0000	0.0761

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0125	8.8500e-003	1.0000e-005		9.3000e-004	9.3000e-004		8.9000e-004	8.9000e-004	0.0000	1.0952	1.0952	2.3000e-004	0.0000	1.1000
Total	1.4900e-003	0.0125	8.8500e-003	1.0000e-005	7.5000e-004	9.3000e-004	1.6800e-003	4.1000e-004	8.9000e-004	1.3000e-003	0.0000	1.0952	1.0952	2.3000e-004	0.0000	1.1000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	6.0000e-005	5.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0760	0.0760	0.0000	0.0000	0.0761
Total	4.0000e-005	6.0000e-005	5.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0760	0.0760	0.0000	0.0000	0.0761

3.4 Blower Building Pad - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7500e-003	0.0275	0.0167	2.0000e-005		1.7800e-003	1.7800e-003		1.6400e-003	1.6400e-003	0.0000	2.2444	2.2444	6.5000e-004	0.0000	2.2580
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.7500e-003	0.0275	0.0167	2.0000e-005		1.7800e-003	1.7800e-003		1.6400e-003	1.6400e-003	0.0000	2.2444	2.2444	6.5000e-004	0.0000	2.2580

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	6.5000e-004	9.6000e-004	0.0000	2.7800e-003	1.0000e-005	2.7900e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.1116	0.1116	0.0000	0.0000	0.1117
Worker	1.1000e-004	1.4000e-004	1.4100e-003	0.0000	0.0205	0.0000	0.0205	2.0800e-003	0.0000	2.0800e-003	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1902
Total	2.0000e-004	7.9000e-004	2.3700e-003	0.0000	0.0233	1.0000e-005	0.0233	2.3600e-003	1.0000e-005	2.3700e-003	0.0000	0.3016	0.3016	1.0000e-005	0.0000	0.3018

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7500e-003	0.0275	0.0167	2.0000e-005		1.7800e-003	1.7800e-003		1.6400e-003	1.6400e-003	0.0000	2.2444	2.2444	6.5000e-004	0.0000	2.2580
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.7500e-003	0.0275	0.0167	2.0000e-005		1.7800e-003	1.7800e-003		1.6400e-003	1.6400e-003	0.0000	2.2444	2.2444	6.5000e-004	0.0000	2.2580

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	6.5000e-004	9.6000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1116	0.1116	0.0000	0.0000	0.1117
Worker	1.1000e-004	1.4000e-004	1.4100e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1902
Total	2.0000e-004	7.9000e-004	2.3700e-003	0.0000	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.3016	0.3016	1.0000e-005	0.0000	0.3018

3.5 Blower Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0112	0.1113	0.0626	9.0000e-005		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	8.1943	8.1943	2.4200e-003	0.0000	8.2451

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Total	0.0112	0.1113	0.0626	9.0000e-005		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	8.1943	8.1943	2.4200e-003	0.0000	8.2451
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	3.8800e-003	5.7800e-003	1.0000e-005	0.0167	8.0000e-005	0.0167	1.7000e-003	7.0000e-005	1.7700e-003	0.0000	0.6698	0.6698	1.0000e-005	0.0000	0.6699
Worker	6.6000e-004	8.5000e-004	8.4600e-003	1.0000e-005	0.1230	1.0000e-005	0.1230	0.0125	1.0000e-005	0.0125	0.0000	1.1395	1.1395	7.0000e-005	0.0000	1.1409
Total	1.2000e-003	4.7300e-003	0.0142	2.0000e-005	0.1397	9.0000e-005	0.1398	0.0142	8.0000e-005	0.0142	0.0000	1.8093	1.8093	8.0000e-005	0.0000	1.8109

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0112	0.1113	0.0626	9.0000e-005		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	8.1943	8.1943	2.4200e-003	0.0000	8.2451
Total	0.0112	0.1113	0.0626	9.0000e-005		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	8.1943	8.1943	2.4200e-003	0.0000	8.2451

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	3.8800e-003	5.7800e-003	1.0000e-005	1.9000e-004	8.0000e-005	2.6000e-004	5.0000e-005	7.0000e-005	1.2000e-004	0.0000	0.6698	0.6698	1.0000e-005	0.0000	0.6699
Worker	6.6000e-004	8.5000e-004	8.4600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1395	1.1395	7.0000e-005	0.0000	1.1409
Total	1.2000e-003	4.7300e-003	0.0142	2.0000e-005	1.3200e-003	9.0000e-005	1.4000e-003	3.5000e-004	8.0000e-005	4.3000e-004	0.0000	1.8093	1.8093	8.0000e-005	0.0000	1.8109

3.6 Blower Building Arch. Coat. - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0139					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4000e-004	4.6300e-003	3.2000e-003	0.0000		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	0.4255	0.4255	6.0000e-005	0.0000	0.4268
Total	0.0147	4.6300e-003	3.2000e-003	0.0000		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	0.4255	0.4255	6.0000e-005	0.0000	0.4268

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	3.2000e-004	4.8000e-004	0.0000	1.3900e-003	1.0000e-005	1.4000e-003	1.4000e-004	1.0000e-005	1.5000e-004	0.0000	0.0558	0.0558	0.0000	0.0000	0.0558
Worker	2.0000e-005	3.0000e-005	2.8000e-004	0.0000	4.1000e-003	0.0000	4.1000e-003	4.2000e-004	0.0000	4.2000e-004	0.0000	0.0380	0.0380	0.0000	0.0000	0.0380
Total	7.0000e-005	3.5000e-004	7.6000e-004	0.0000	5.4900e-003	1.0000e-005	5.5000e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	0.0938	0.0938	0.0000	0.0000	0.0939

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0139					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4000e-004	4.6300e-003	3.2000e-003	0.0000		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	0.4255	0.4255	6.0000e-005	0.0000	0.4268
Total	0.0147	4.6300e-003	3.2000e-003	0.0000		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	0.4255	0.4255	6.0000e-005	0.0000	0.4268

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	3.2000e-004	4.8000e-004	0.0000	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0558	0.0558	0.0000	0.0000	0.0558
Worker	2.0000e-005	3.0000e-005	2.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0380	0.0380	0.0000	0.0000	0.0380
Total	7.0000e-005	3.5000e-004	7.6000e-004	0.0000	6.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.0938	0.0938	0.0000	0.0000	0.0939

3.7 Internal Piping to Pond 1 - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3400e-003	0.0374	0.0251	4.0000e-005		2.0900e-003	2.0900e-003		1.9200e-003	1.9200e-003	0.0000	3.6103	3.6103	1.0500e-003	0.0000	3.6325
Total	3.3400e-003	0.0374	0.0251	4.0000e-005		2.0900e-003	2.0900e-003		1.9200e-003	1.9200e-003	0.0000	3.6103	3.6103	1.0500e-003	0.0000	3.6325

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	6.5000e-004	9.6000e-004	0.0000	2.7800e-003	1.0000e-005	2.7900e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.1116	0.1116	0.0000	0.0000	0.1117
Worker	1.1000e-004	1.4000e-004	1.4100e-003	0.0000	0.0205	0.0000	0.0205	2.0800e-003	0.0000	2.0800e-003	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1902
Total	2.0000e-004	7.9000e-004	2.3700e-003	0.0000	0.0233	1.0000e-005	0.0233	2.3600e-003	1.0000e-005	2.3700e-003	0.0000	0.3016	0.3016	1.0000e-005	0.0000	0.3018

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.3400e-003	9.3500e-003	0.0251	4.0000e-005		2.0900e-003	2.0900e-003		1.9200e-003	1.9200e-003	0.0000	3.6103	3.6103	1.0500e-003	0.0000	3.6325
Total	3.3400e-003	9.3500e-003	0.0251	4.0000e-005		2.0900e-003	2.0900e-003		1.9200e-003	1.9200e-003	0.0000	3.6103	3.6103	1.0500e-003	0.0000	3.6325

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	6.5000e-004	9.6000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1116	0.1116	0.0000	0.0000	0.1117
Worker	1.1000e-004	1.4000e-004	1.4100e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1899	0.1899	1.0000e-005	0.0000	0.1902
Total	2.0000e-004	7.9000e-004	2.3700e-003	0.0000	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.3016	0.3016	1.0000e-005	0.0000	0.3018

3.8 Pond 1 Demo - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Off-Road	4.2800e-003	0.0380	0.0226	3.0000e-005		2.6300e-003	2.6300e-003		2.5100e-003	2.5100e-003	0.0000	3.1445	3.1445	6.9000e-004	0.0000	3.1590
Total	4.2800e-003	0.0380	0.0226	3.0000e-005	2.9000e-004	2.6300e-003	2.9200e-003	4.0000e-005	2.5100e-003	2.5500e-003	0.0000	3.1445	3.1445	6.9000e-004	0.0000	3.1590

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	1.8000e-004	1.7000e-004	0.0000	7.6000e-004	0.0000	7.6000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0349	0.0349	0.0000	0.0000	0.0349
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.8000e-004	2.8200e-003	0.0000	0.0410	0.0000	0.0410	4.1500e-003	0.0000	4.1600e-003	0.0000	0.3798	0.3798	2.0000e-005	0.0000	0.3803
Total	2.4000e-004	4.6000e-004	2.9900e-003	0.0000	0.0418	0.0000	0.0418	4.2300e-003	0.0000	4.2400e-003	0.0000	0.4147	0.4147	2.0000e-005	0.0000	0.4152

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0380	0.0226	3.0000e-005		2.6300e-003	2.6300e-003		2.5100e-003	2.5100e-003	0.0000	3.1445	3.1445	6.9000e-004	0.0000	3.1590
Total	4.2800e-003	0.0380	0.0226	3.0000e-005	2.9000e-004	2.6300e-003	2.9200e-003	4.0000e-005	2.5100e-003	2.5500e-003	0.0000	3.1445	3.1445	6.9000e-004	0.0000	3.1590

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	1.8000e-004	1.7000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0349	0.0349	0.0000	0.0000	0.0349
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.8000e-004	2.8200e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3798	0.3798	2.0000e-005	0.0000	0.3803
Total	2.4000e-004	4.6000e-004	2.9900e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.4147	0.4147	2.0000e-005	0.0000	0.4152

3.9 Pond 1 MLE Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0101	0.0997	0.0593	8.0000e-005		6.8100e-003	6.8100e-003		6.2700e-003	6.2700e-003	0.0000	7.8204	7.8204	2.2500e-003	0.0000	7.8675
Total	0.0101	0.0997	0.0593	8.0000e-005		6.8100e-003	6.8100e-003		6.2700e-003	6.2700e-003	0.0000	7.8204	7.8204	2.2500e-003	0.0000	7.8675

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	3.8800e-003	5.7800e-003	1.0000e-005	0.0167	8.0000e-005	0.0167	1.7000e-003	7.0000e-005	1.7700e-003	0.0000	0.6698	0.6698	1.0000e-005	0.0000	0.6699
Worker	6.6000e-004	8.5000e-004	8.4600e-003	1.0000e-005	0.1230	1.0000e-005	0.1230	0.0125	1.0000e-005	0.0125	0.0000	1.1395	1.1395	7.0000e-005	0.0000	1.1409
Total	1.2000e-003	4.7300e-003	0.0142	2.0000e-005	0.1397	9.0000e-005	0.1398	0.0142	8.0000e-005	0.0142	0.0000	1.8093	1.8093	8.0000e-005	0.0000	1.8109

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0101	0.0838	0.0593	8.0000e-005		6.8100e-003	6.8100e-003		6.2700e-003	6.2700e-003	0.0000	7.8204	7.8204	2.2500e-003	0.0000	7.8675
Total	0.0101	0.0838	0.0593	8.0000e-005		6.8100e-003	6.8100e-003		6.2700e-003	6.2700e-003	0.0000	7.8204	7.8204	2.2500e-003	0.0000	7.8675

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	3.8800e-003	5.7800e-003	1.0000e-005	1.9000e-004	8.0000e-005	2.6000e-004	5.0000e-005	7.0000e-005	1.2000e-004	0.0000	0.6698	0.6698	1.0000e-005	0.0000	0.6699
Worker	6.6000e-004	8.5000e-004	8.4600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1395	1.1395	7.0000e-005	0.0000	1.1409
Total	1.2000e-003	4.7300e-003	0.0142	2.0000e-005	1.3200e-003	9.0000e-005	1.4000e-003	3.5000e-004	8.0000e-005	4.3000e-004	0.0000	1.8093	1.8093	8.0000e-005	0.0000	1.8109

3.10 Internal Piping to Pond 2 - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2900e-003	0.0361	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962
Total	3.2900e-003	0.0361	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	5.5000e-004	9.0000e-004	0.0000	2.7800e-003	1.0000e-005	2.7900e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.1102	0.1102	0.0000	0.0000	0.1102
Worker	1.0000e-004	1.3000e-004	1.2400e-003	0.0000	0.0205	0.0000	0.0205	2.0800e-003	0.0000	2.0800e-003	0.0000	0.1834	0.1834	1.0000e-005	0.0000	0.1836
Total	1.8000e-004	6.8000e-004	2.1400e-003	0.0000	0.0233	1.0000e-005	0.0233	2.3600e-003	1.0000e-005	2.3700e-003	0.0000	0.2936	0.2936	1.0000e-005	0.0000	0.2938

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2900e-003	9.1000e-003	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962
Total	3.2900e-003	9.1000e-003	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	5.5000e-004	9.0000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1102	0.1102	0.0000	0.0000	0.1102
Worker	1.0000e-004	1.3000e-004	1.2400e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1834	0.1834	1.0000e-005	0.0000	0.1836
Total	1.8000e-004	6.8000e-004	2.1400e-003	0.0000	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.2936	0.2936	1.0000e-005	0.0000	0.2938

3.11 Pond 2 Demo - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Off-Road	2.6300e-003	0.0260	0.0141	2.0000e-005		1.5900e-003	1.5900e-003		1.4700e-003	1.4700e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587
Total	2.6300e-003	0.0260	0.0141	2.0000e-005	2.9000e-004	1.5900e-003	1.8800e-003	4.0000e-005	1.4700e-003	1.5100e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.6000e-004	1.6000e-004	0.0000	7.6000e-004	0.0000	7.6000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0345	0.0345	0.0000	0.0000	0.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4900e-003	0.0000	0.0410	0.0000	0.0410	4.1500e-003	0.0000	4.1600e-003	0.0000	0.3667	0.3667	2.0000e-005	0.0000	0.3671
Total	2.0000e-004	4.1000e-004	2.6500e-003	0.0000	0.0418	0.0000	0.0418	4.2300e-003	0.0000	4.2400e-003	0.0000	0.4011	0.4011	2.0000e-005	0.0000	0.4016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0260	0.0141	2.0000e-005		1.5900e-003	1.5900e-003		1.4700e-003	1.4700e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587
Total	2.6300e-003	0.0260	0.0141	2.0000e-005	2.9000e-004	1.5900e-003	1.8800e-003	4.0000e-005	1.4700e-003	1.5100e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587

Mitigated Construction Off-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.6000e-004	1.6000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0345	0.0345	0.0000	0.0000	0.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4900e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3667	0.3667	2.0000e-005	0.0000	0.3671
Total	2.0000e-004	4.1000e-004	2.6500e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4011	0.4011	2.0000e-005	0.0000	0.4016

3.12 Pond 2 MLE Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8600e-003	0.0964	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897
Total	9.8600e-003	0.0964	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	3.3200e-003	5.4000e-003	1.0000e-005	0.0167	6.0000e-005	0.0167	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	0.6613	0.6613	1.0000e-005	0.0000	0.6614
Worker	5.8000e-004	7.5000e-004	7.4600e-003	1.0000e-005	0.1230	1.0000e-005	0.1230	0.0125	1.0000e-005	0.0125	0.0000	1.1001	1.1001	6.0000e-005	0.0000	1.1014
Total	1.0700e-003	4.0700e-003	0.0129	2.0000e-005	0.1397	7.0000e-005	0.1398	0.0142	6.0000e-005	0.0142	0.0000	1.7614	1.7614	7.0000e-005	0.0000	1.7628

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8600e-003	0.0812	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897
Total	9.8600e-003	0.0812	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	3.3200e-003	5.4000e-003	1.0000e-005	1.9000e-004	6.0000e-005	2.4000e-004	5.0000e-005	5.0000e-005	1.1000e-004	0.0000	0.6613	0.6613	1.0000e-005	0.0000	0.6614
Worker	5.8000e-004	7.5000e-004	7.4600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1001	1.1001	6.0000e-005	0.0000	1.1014
Total	1.0700e-003	4.0700e-003	0.0129	2.0000e-005	1.3200e-003	7.0000e-005	1.3800e-003	3.5000e-004	6.0000e-005	4.2000e-004	0.0000	1.7614	1.7614	7.0000e-005	0.0000	1.7628

3.13 Internal Piping to Pond 3 - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2900e-003	0.0361	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962
Total	3.2900e-003	0.0361	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	5.5000e-004	9.0000e-004	0.0000	2.7800e-003	1.0000e-005	2.7900e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.1102	0.1102	0.0000	0.0000	0.1102
Worker	1.0000e-004	1.3000e-004	1.2400e-003	0.0000	0.0205	0.0000	0.0205	2.0800e-003	0.0000	2.0800e-003	0.0000	0.1834	0.1834	1.0000e-005	0.0000	0.1836
Total	1.8000e-004	6.8000e-004	2.1400e-003	0.0000	0.0233	1.0000e-005	0.0233	2.3600e-003	1.0000e-005	2.3700e-003	0.0000	0.2936	0.2936	1.0000e-005	0.0000	0.2938

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2900e-003	9.1000e-003	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962
Total	3.2900e-003	9.1000e-003	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	5.5000e-004	9.0000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1102	0.1102	0.0000	0.0000	0.1102
Worker	1.0000e-004	1.3000e-004	1.2400e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1834	0.1834	1.0000e-005	0.0000	0.1836
Total	1.8000e-004	6.8000e-004	2.1400e-003	0.0000	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.2936	0.2936	1.0000e-005	0.0000	0.2938

3.14 Pond 3 Demo - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Off-Road	2.6300e-003	0.0260	0.0141	2.0000e-005		1.5900e-003	1.5900e-003		1.4700e-003	1.4700e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587
Total	2.6300e-003	0.0260	0.0141	2.0000e-005	2.9000e-004	1.5900e-003	1.8800e-003	4.0000e-005	1.4700e-003	1.5100e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.6000e-004	1.6000e-004	0.0000	7.6000e-004	0.0000	7.6000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0345	0.0345	0.0000	0.0000	0.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4900e-003	0.0000	0.0410	0.0000	0.0410	4.1500e-003	0.0000	4.1600e-003	0.0000	0.3667	0.3667	2.0000e-005	0.0000	0.3671
Total	2.0000e-004	4.1000e-004	2.6500e-003	0.0000	0.0418	0.0000	0.0418	4.2300e-003	0.0000	4.2400e-003	0.0000	0.4011	0.4011	2.0000e-005	0.0000	0.4016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0260	0.0141	2.0000e-005		1.5900e-003	1.5900e-003		1.4700e-003	1.4700e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587
Total	2.6300e-003	0.0260	0.0141	2.0000e-005	2.9000e-004	1.5900e-003	1.8800e-003	4.0000e-005	1.4700e-003	1.5100e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.6000e-004	1.6000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0345	0.0345	0.0000	0.0000	0.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4900e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3667	0.3667	2.0000e-005	0.0000	0.3671
Total	2.0000e-004	4.1000e-004	2.6500e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4011	0.4011	2.0000e-005	0.0000	0.4016

3.15 Pond 3 MLE Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8600e-003	0.0964	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897
Total	9.8600e-003	0.0964	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	3.3200e-003	5.4000e-003	1.0000e-005	0.0167	6.0000e-005	0.0167	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	0.6613	0.6613	1.0000e-005	0.0000	0.6614
Worker	5.8000e-004	7.5000e-004	7.4600e-003	1.0000e-005	0.1230	1.0000e-005	0.1230	0.0125	1.0000e-005	0.0125	0.0000	1.1001	1.1001	6.0000e-005	0.0000	1.1014
Total	1.0700e-003	4.0700e-003	0.0129	2.0000e-005	0.1397	7.0000e-005	0.1398	0.0142	6.0000e-005	0.0142	0.0000	1.7614	1.7614	7.0000e-005	0.0000	1.7628

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8600e-003	0.0812	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897
Total	9.8600e-003	0.0812	0.0592	8.0000e-005		6.5900e-003	6.5900e-003		6.0700e-003	6.0700e-003	0.0000	7.7425	7.7425	2.2400e-003	0.0000	7.7897

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	3.3200e-003	5.4000e-003	1.0000e-005	1.9000e-004	6.0000e-005	2.4000e-004	5.0000e-005	5.0000e-005	1.1000e-004	0.0000	0.6613	0.6613	1.0000e-005	0.0000	0.6614
Worker	5.8000e-004	7.5000e-004	7.4600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1001	1.1001	6.0000e-005	0.0000	1.1014
Total	1.0700e-003	4.0700e-003	0.0129	2.0000e-005	1.3200e-003	7.0000e-005	1.3800e-003	3.5000e-004	6.0000e-005	4.2000e-004	0.0000	1.7614	1.7614	7.0000e-005	0.0000	1.7628

3.16 Internal Piping to Pond 4 - 2015**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2900e-003	0.0361	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962
Total	3.2900e-003	0.0361	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	5.5000e-004	9.0000e-004	0.0000	2.7800e-003	1.0000e-005	2.7900e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.1102	0.1102	0.0000	0.0000	0.1102
Worker	1.0000e-004	1.3000e-004	1.2400e-003	0.0000	0.0205	0.0000	0.0205	2.0800e-003	0.0000	2.0800e-003	0.0000	0.1834	0.1834	1.0000e-005	0.0000	0.1836
Total	1.8000e-004	6.8000e-004	2.1400e-003	0.0000	0.0233	1.0000e-005	0.0233	2.3600e-003	1.0000e-005	2.3700e-003	0.0000	0.2936	0.2936	1.0000e-005	0.0000	0.2938

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2900e-003	9.1000e-003	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962
Total	3.2900e-003	9.1000e-003	0.0252	4.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	3.5740	3.5740	1.0500e-003	0.0000	3.5962

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	5.5000e-004	9.0000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1102	0.1102	0.0000	0.0000	0.1102
Worker	1.0000e-004	1.3000e-004	1.2400e-003	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1834	0.1834	1.0000e-005	0.0000	0.1836
Total	1.8000e-004	6.8000e-004	2.1400e-003	0.0000	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.2936	0.2936	1.0000e-005	0.0000	0.2938

3.17 Pond 4 Demo - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Off-Road	2.6300e-003	0.0260	0.0141	2.0000e-005		1.5900e-003	1.5900e-003		1.4700e-003	1.4700e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587
Total	2.6300e-003	0.0260	0.0141	2.0000e-005	2.9000e-004	1.5900e-003	1.8800e-003	4.0000e-005	1.4700e-003	1.5100e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.6000e-004	1.6000e-004	0.0000	7.6000e-004	0.0000	7.6000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0345	0.0345	0.0000	0.0000	0.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4900e-003	0.0000	0.0410	0.0000	0.0410	4.1500e-003	0.0000	4.1600e-003	0.0000	0.3667	0.3667	2.0000e-005	0.0000	0.3671
Total	2.0000e-004	4.1000e-004	2.6500e-003	0.0000	0.0418	0.0000	0.0418	4.2300e-003	0.0000	4.2400e-003	0.0000	0.4011	0.4011	2.0000e-005	0.0000	0.4016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9000e-004	0.0000	2.9000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0260	0.0141	2.0000e-005		1.5900e-003	1.5900e-003		1.4700e-003	1.4700e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587
Total	2.6300e-003	0.0260	0.0141	2.0000e-005	2.9000e-004	1.5900e-003	1.8800e-003	4.0000e-005	1.4700e-003	1.5100e-003	0.0000	2.0469	2.0469	5.6000e-004	0.0000	2.0587

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.6000e-004	1.6000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0345	0.0345	0.0000	0.0000	0.0345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4900e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3667	0.3667	2.0000e-005	0.0000	0.3671
Total	2.0000e-004	4.1000e-004	2.6500e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4011	0.4011	2.0000e-005	0.0000	0.4016

3.18 Pond 4 MLE Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8700e-003	0.0966	0.0593	8.0000e-005		6.6000e-003	6.6000e-003		6.0800e-003	6.0800e-003	0.0000	7.7620	7.7620	2.2500e-003	0.0000	7.8093
Total	9.8700e-003	0.0966	0.0593	8.0000e-005		6.6000e-003	6.6000e-003		6.0800e-003	6.0800e-003	0.0000	7.7620	7.7620	2.2500e-003	0.0000	7.8093

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	3.3200e-003	5.4000e-003	1.0000e-005	0.0167	6.0000e-005	0.0167	1.7000e-003	5.0000e-005	1.7500e-003	0.0000	0.6613	0.6613	1.0000e-005	0.0000	0.6614
Worker	5.8000e-004	7.5000e-004	7.4600e-003	1.0000e-005	0.1230	1.0000e-005	0.1230	0.0125	1.0000e-005	0.0125	0.0000	1.1001	1.1001	6.0000e-005	0.0000	1.1014
Total	1.0700e-003	4.0700e-003	0.0129	2.0000e-005	0.1397	7.0000e-005	0.1398	0.0142	6.0000e-005	0.0142	0.0000	1.7614	1.7614	7.0000e-005	0.0000	1.7628

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8700e-003	0.0812	0.0593	8.0000e-005		6.6000e-003	6.6000e-003		6.0800e-003	6.0800e-003	0.0000	7.7620	7.7620	2.2500e-003	0.0000	7.8093
Total	9.8700e-003	0.0812	0.0593	8.0000e-005		6.6000e-003	6.6000e-003		6.0800e-003	6.0800e-003	0.0000	7.7620	7.7620	2.2500e-003	0.0000	7.8093

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	3.3200e-003	5.4000e-003	1.0000e-005	1.9000e-004	6.0000e-005	2.4000e-004	5.0000e-005	5.0000e-005	1.1000e-004	0.0000	0.6613	0.6613	1.0000e-005	0.0000	0.6614
Worker	5.8000e-004	7.5000e-004	7.4600e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1001	1.1001	6.0000e-005	0.0000	1.1014
Total	1.0700e-003	4.0700e-003	0.0129	2.0000e-005	1.3200e-003	7.0000e-005	1.3800e-003	3.5000e-004	6.0000e-005	4.2000e-004	0.0000	1.7614	1.7614	7.0000e-005	0.0000	1.7628

MLE Construction

Yolo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.70	2,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	54
Climate Zone	2			Operational Year	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Single pond acreage and estimated blower building plus internal piping acreage. Concrete removal square footage per pond.

Construction Phase - Blower Building Construction

Off-road Equipment -

Off-road Equipment - 0.26 acre pad

Off-road Equipment - 0.26 acre pad

Off-road Equipment - 0.26 acre pad

Off-road Equipment - internal piping of blower building pumps to pond

Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Off-road Equipment - internal piping of blower building pumps to pond

Appendix A

Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Off-road Equipment - internal piping of blower building pumps to pond

Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Off-road Equipment - internal piping of blower building pumps to pond

Off-road Equipment - demolition and removal of existing aeration equipment

Off-road Equipment - ditch reconstruction, installation of MLE equipment, and finishing

Grading -

Demolition -

Trips and VMT - vendor trips for material delivery, haul trip for demolition material removal

Area Coating -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	NumDays	100.00	30.00
tblConstructionPhase	PhaseEndDate	1/14/2015	1/27/2015
tblConstructionPhase	PhaseEndDate	4/7/2015	4/20/2015
tblConstructionPhase	PhaseEndDate	6/29/2015	7/10/2015
tblConstructionPhase	PhaseStartDate	1/1/2015	1/14/2015
tblConstructionPhase	PhaseStartDate	3/25/2015	4/7/2015
tblConstructionPhase	PhaseStartDate	6/16/2015	6/29/2015
tblConstructionPhase	PhaseStartDate	7/11/2015	7/13/2015
tblConstructionPhase	PhaseStartDate	7/25/2015	7/27/2015
tblLandUse	LandUseSquareFeet	0.00	2,000.00
tblLandUse	LotAcreage	0.00	0.70
tblOffRoadEquipment	HorsePower	81.00	16.00

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tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	HorsePower	81.00	16.00
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment

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tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Pond 2 MLE Construction
tblOffRoadEquipment	PhaseName		Pond 3 MLE Construction
tblOffRoadEquipment	PhaseName		Pond 4 MLE Construction
tblOffRoadEquipment	PhaseName		Pond 1 MLE Construction
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 1
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 1
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 1
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 1
tblOffRoadEquipment	PhaseName		Pond 1 Demo

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tblOffRoadEquipment	PhaseName		Pond 1 MLE Construction
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 2
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 2
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 2
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 2
tblOffRoadEquipment	PhaseName		Pond 2 Demo
tblOffRoadEquipment	PhaseName		Pond 2 MLE Construction
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 3
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 3
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 3
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 3
tblOffRoadEquipment	PhaseName		Pond 3 Demo
tblOffRoadEquipment	PhaseName		Pond 3 MLE Construction
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 4
tblOffRoadEquipment	PhaseName		Pond 4 MLE Construction
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 4
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 4
tblOffRoadEquipment	PhaseName		Internal Piping to Pond 4
tblOffRoadEquipment	PhaseName		Pond 4 Demo
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	4.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.00
tblOffRoadEquipment	UsageHours	4.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00

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tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	PhaseName		Internal Piping to Pond 3
tblTripsAndVMT	PhaseName		Internal Piping to Pond 4
tblTripsAndVMT	PhaseName		Internal Piping to Pond 1
tblTripsAndVMT	PhaseName		Internal Piping to Pond 2
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	1.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	1.00	10.00
tblTripsAndVMT	WorkerTripNumber	1.00	10.00
tblTripsAndVMT	WorkerTripNumber	1.00	10.00
tblTripsAndVMT	WorkerTripNumber	1.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	5.8907	14.5136	9.4484	0.0130	10.9172	0.9311	11.6332	1.3861	0.8910	2.2771	0.0000	1,288.6820	1,288.6820	0.2966	0.0000	1,294.9096
2015	0.7386	7.3560	5.5402	8.2500e-003	10.9172	0.4444	11.3615	1.1047	0.4094	1.5141	0.0000	851.4378	851.4378	0.2349	0.0000	856.3701
Total	6.6293	21.8696	14.9887	0.0212	21.8343	1.3755	22.9947	2.4908	1.3004	3.7912	0.0000	2,140.1198	2,140.1198	0.5314	0.0000	2,151.2797

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	5.8907	14.5136	9.4484	0.0130	0.8306	0.9311	1.7617	0.4345	0.8910	1.3255	0.0000	1,288.6820	1,288.6820	0.2966	0.0000	1,294.9096
2015	0.7386	5.6965	5.5402	8.2500e-003	0.1372	0.4444	0.5350	0.0299	0.4094	0.4339	0.0000	851.4378	851.4378	0.2349	0.0000	856.3701
Total	6.6293	20.2101	14.9887	0.0212	0.9678	1.3755	2.2968	0.4645	1.3004	1.7593	0.0000	2,140.1198	2,140.1198	0.5314	0.0000	2,151.2797

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	7.59	0.00	0.00	95.57	0.00	90.01	81.35	0.00	53.59	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Appendix A

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Blower Building Site Prep	Site Preparation	8/25/2014	8/25/2014	5	1	
2	Blower Building Grading	Grading	8/26/2014	8/27/2014	5	2	
3	Blower Building Pad	Paving	8/28/2014	9/3/2014	5	5	
4	Blower Building Construction	Building Construction	9/4/2014	10/15/2014	5	30	
5	Blower Building Arch. Coat.	Architectural Coating	10/16/2014	10/22/2014	5	5	
6	Internal Piping to Pond 1	Trenching	10/23/2014	11/5/2014	5	10	
7	Pond 1 Demo	Demolition	11/6/2014	11/19/2014	5	10	
8	Pond 1 MLE Construction	Building Construction	11/20/2014	12/31/2014	5	30	
9	Internal Piping to Pond 2	Trenching	1/14/2015	1/27/2015	5	10	
10	Pond 2 Demo	Demolition	1/28/2015	2/10/2015	5	10	
11	Pond 2 MLE Construction	Building Construction	2/11/2015	3/24/2015	5	30	
12	Internal Piping to Pond 3	Trenching	4/7/2015	4/20/2015	5	10	
13	Pond 3 Demo	Demolition	4/21/2015	5/4/2015	5	10	
14	Pond 3 MLE Construction	Building Construction	5/5/2015	6/15/2015	5	30	
15	Internal Piping to Pond 4	Trenching	6/29/2015	7/10/2015	5	10	
16	Pond 4 Demo	Demolition	7/13/2015	7/24/2015	5	10	
17	Pond 4 MLE Construction	Building Construction	7/27/2015	9/4/2015	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,000; Non-Residential Outdoor: 1,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Internal Piping to Pond 3	Excavators	1	8.00	162	0.38
Internal Piping to Pond 3	Concrete/Industrial Saws	1	1.00	16	0.73
Internal Piping to Pond 3	Paving Equipment	1	1.00	130	0.36

Appendix A

Internal Piping to Pond 3	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 3 Demo	Cranes	1	2.00	226	0.29
Pond 3 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 3 MLE Construction	Paving Equipment	1	2.00	130	0.36
Internal Piping to Pond 4	Excavators	1	8.00	162	0.38
Internal Piping to Pond 4	Concrete/Industrial Saws	1	1.00	16	0.73
Internal Piping to Pond 4	Paving Equipment	1	1.00	130	0.36
Internal Piping to Pond 4	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 4 Demo	Cranes	1	2.00	226	0.29
Pond 4 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 4 MLE Construction	Paving Equipment	1	2.00	130	0.36
Blower Building Arch. Coat.	Air Compressors	1	4.00	78	0.48
Blower Building Pad	Cement and Mortar Mixers	1	6.00	9	0.56
Pond 2 Demo	Concrete/Industrial Saws	1	4.00	16	0.73
Blower Building Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Blower Building Construction	Cranes	1	2.00	226	0.29
Blower Building Construction	Forklifts	1	6.00	89	0.20
Blower Building Site Prep	Graders	1	8.00	174	0.41
Blower Building Pad	Pavers	1	7.00	125	0.42
Blower Building Pad	Rollers	1	7.00	80	0.38
Pond 3 Demo	Concrete/Industrial Saws	1	4.00	16	0.73
Blower Building Grading	Rubber Tired Dozers	1	1.00	255	0.40
Blower Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pond 4 Demo	Concrete/Industrial Saws	1	4.00	16	0.73
Blower Building Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Blower Building Pad	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Blower Building Site Prep	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pond 1 Demo	Concrete/Industrial Saws	1	4.00	81	0.73
Pond 2 MLE Construction	Cranes	1	1.00	226	0.29
Pond 3 MLE Construction	Cranes	1	1.00	226	0.29

Appendix A

Pond 4 MLE Construction	Cranes	1	1.00	226	0.29
Pond 1 MLE Construction	Cranes	1	1.00	226	0.29
Pond 2 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 3 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 4 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 1 MLE Construction	Forklifts	1	6.00	89	0.20
Pond 2 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 1 MLE Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pond 2 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 3 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 4 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 1 MLE Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 2 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 3 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 4 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pond 1 Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Internal Piping to Pond 1	Excavators	1	8.00	162	0.38
Internal Piping to Pond 1	Concrete/Industrial Saws	1	1.00	16	0.73
Internal Piping to Pond 1	Paving Equipment	1	1.00	130	0.36
Internal Piping to Pond 1	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 1 Demo	Cranes	1	2.00	226	0.29
Pond 1 MLE Construction	Paving Equipment	1	2.00	130	0.36
Internal Piping to Pond 2	Excavators	1	8.00	162	0.38
Internal Piping to Pond 2	Concrete/Industrial Saws	1	1.00	16	0.73
Internal Piping to Pond 2	Paving Equipment	1	1.00	130	0.36
Internal Piping to Pond 2	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Pond 2 Demo	Cranes	1	2.00	226	0.29
Pond 2 MLE Construction	Paving Equipment	1	2.00	130	0.36

Trips and VMT

Appendix A

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pond 2 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Site Prep	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Pad	7	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Blower Building Arch. Coat	1	2.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 3 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 4 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 1 MLE Construction	5	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 2 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 3 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 4 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond 1 Demo	4	10.00	0.00	1.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 3	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 4	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 1	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Internal Piping to Pond 2	0	5.00	1.00		10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Blower Building Site Prep - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000

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Off-Road	1.4341	14.4817	7.3936	9.3700e-003		0.8920	0.8920		0.8206	0.8206		995.1971	995.1971	0.2941		1,001.3730
Total	1.4341	14.4817	7.3936	9.3700e-003	0.5303	0.8920	1.4223	0.0573	0.8206	0.8779		995.1971	995.1971	0.2941		1,001.3730

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0233	0.0319	0.2978	4.6000e-004	4.8075	3.4000e-004	4.8079	0.4862	3.1000e-004	0.4865		40.7176	40.7176	2.4600e-003		40.7693
Total	0.0233	0.0319	0.2978	4.6000e-004	4.8075	3.4000e-004	4.8079	0.4862	3.1000e-004	0.4865		40.7176	40.7176	2.4600e-003		40.7693

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.4341	14.4817	7.3936	9.3700e-003		0.8920	0.8920		0.8206	0.8206	0.0000	995.1971	995.1971	0.2941		1,001.3730
Total	1.4341	14.4817	7.3936	9.3700e-003	0.5303	0.8920	1.4223	0.0573	0.8206	0.8779	0.0000	995.1971	995.1971	0.2941		1,001.3730

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0233	0.0319	0.2978	4.6000e-004	0.0389	3.4000e-004	0.0393	0.0104	3.1000e-004	0.0107		40.7176	40.7176	2.4600e-003		40.7693
Total	0.0233	0.0319	0.2978	4.6000e-004	0.0389	3.4000e-004	0.0393	0.0104	3.1000e-004	0.0107		40.7176	40.7176	2.4600e-003		40.7693

3.3 Blower Building Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.4929	12.4922	8.8528	0.0121		0.9304	0.9304		0.8904	0.8904		1,207.2469	1,207.2469	0.2515		1,212.5281
Total	1.4929	12.4922	8.8528	0.0121	0.7528	0.9304	1.6832	0.4138	0.8904	1.3041		1,207.2469	1,207.2469	0.2515		1,212.5281

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.4929	12.4922	8.8528	0.0121		0.9304	0.9304		0.8904	0.8904	0.0000	1,207.2469	1,207.2469	0.2515		1,212.5281
Total	1.4929	12.4922	8.8528	0.0121	0.7528	0.9304	1.6832	0.4138	0.8904	1.3041	0.0000	1,207.2469	1,207.2469	0.2515		1,212.5281

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385

3.4 Blower Building Pad - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0999	11.0160	6.6615	9.5000e-003		0.7103	0.7103		0.6544	0.6544		989.6209	989.6209	0.2853		995.6111
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0999	11.0160	6.6615	9.5000e-003		0.7103	0.7103		0.6544	0.6544		989.6209	989.6209	0.2853		995.6111

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0438	0.2633	0.5075	4.8000e-004	1.3021	5.0400e-003	1.3071	0.1323	4.6300e-003	0.1370		49.0075	49.0075	5.0000e-004		49.0181
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0903	0.3270	1.1032	1.4000e-003	10.9171	5.7100e-003	10.9229	1.1047	5.2400e-003	1.1099		130.4427	130.4427	5.4200e-003		130.5566

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0999	11.0160	6.6615	9.5000e-003		0.7103	0.7103		0.6544	0.6544	0.0000	989.6209	989.6209	0.2853		995.6111
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0999	11.0160	6.6615	9.5000e-003		0.7103	0.7103		0.6544	0.6544	0.0000	989.6209	989.6209	0.2853		995.6111

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0438	0.2633	0.5075	4.8000e-004	0.0128	5.0400e-003	0.0179	3.6900e-003	4.6300e-003	8.3200e-003		49.0075	49.0075	5.0000e-004		49.0181
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0903	0.3270	1.1032	1.4000e-003	0.0907	5.7100e-003	0.0964	0.0244	5.2400e-003	0.0297		130.4427	130.4427	5.4200e-003		130.5566

3.5 Blower Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7465	7.4165	4.1710	5.6700e-003		0.5167	0.5167		0.4754	0.4754		602.1748	602.1748	0.1780		605.9118

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Total	0.7465	7.4165	4.1710	5.6700e-003		0.5167	0.5167		0.4754	0.4754		602.1748	602.1748	0.1780		605.9118
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0438	0.2633	0.5075	4.8000e-004	1.3021	5.0400e-003	1.3071	0.1323	4.6300e-003	0.1370		49.0075	49.0075	5.0000e-004		49.0181
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0903	0.3270	1.1032	1.4000e-003	10.9171	5.7100e-003	10.9229	1.1047	5.2400e-003	1.1099		130.4427	130.4427	5.4200e-003		130.5566

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7465	7.4165	4.1710	5.6700e-003		0.5167	0.5167		0.4754	0.4754	0.0000	602.1748	602.1748	0.1780		605.9118
Total	0.7465	7.4165	4.1710	5.6700e-003		0.5167	0.5167		0.4754	0.4754	0.0000	602.1748	602.1748	0.1780		605.9118

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0438	0.2633	0.5075	4.8000e-004	0.0128	5.0400e-003	0.0179	3.6900e-003	4.6300e-003	8.3200e-003		49.0075	49.0075	5.0000e-004		49.0181
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0903	0.3270	1.1032	1.4000e-003	0.0907	5.7100e-003	0.0964	0.0244	5.2400e-003	0.0297		130.4427	130.4427	5.4200e-003		130.5566

3.6 Blower Building Arch. Coat. - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.5620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2975	1.8516	1.2810	1.9800e-003		0.1634	0.1634		0.1634	0.1634		187.6320	187.6320	0.0267		188.1936
Total	5.8595	1.8516	1.2810	1.9800e-003		0.1634	0.1634		0.1634	0.1634		187.6320	187.6320	0.0267		188.1936

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0219	0.1317	0.2538	2.4000e-004	0.6511	2.5200e-003	0.6536	0.0662	2.3200e-003	0.0685		24.5038	24.5038	2.5000e-004		24.5090
Worker	9.3100e-003	0.0127	0.1191	1.8000e-004	1.9230	1.3000e-004	1.9232	0.1945	1.2000e-004	0.1946		16.2870	16.2870	9.8000e-004		16.3077
Total	0.0312	0.1444	0.3729	4.2000e-004	2.5741	2.6500e-003	2.5767	0.2606	2.4400e-003	0.2631		40.7908	40.7908	1.2300e-003		40.8167

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.5620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2975	1.8516	1.2810	1.9800e-003		0.1634	0.1634		0.1634	0.1634	0.0000	187.6320	187.6320	0.0267		188.1936
Total	5.8595	1.8516	1.2810	1.9800e-003		0.1634	0.1634		0.1634	0.1634	0.0000	187.6320	187.6320	0.0267		188.1936

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0219	0.1317	0.2538	2.4000e-004	6.4000e-003	2.5200e-003	8.9200e-003	1.8500e-003	2.3200e-003	4.1600e-003		24.5038	24.5038	2.5000e-004		24.5090
Worker	9.3100e-003	0.0127	0.1191	1.8000e-004	0.0156	1.3000e-004	0.0157	4.1500e-003	1.2000e-004	4.2700e-003		16.2870	16.2870	9.8000e-004		16.3077
Total	0.0312	0.1444	0.3729	4.2000e-004	0.0220	2.6500e-003	0.0246	6.0000e-003	2.4400e-003	8.4300e-003		40.7908	40.7908	1.2300e-003		40.8167

3.7 Internal Piping to Pond 1 - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6690	7.4831	5.0237	7.5500e-003		0.4175	0.4175		0.3844	0.3844		795.9397	795.9397	0.2325		800.8213
Total	0.6690	7.4831	5.0237	7.5500e-003		0.4175	0.4175		0.3844	0.3844		795.9397	795.9397	0.2325		800.8213

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0219	0.1317	0.2538	2.4000e-004	0.6511	2.5200e-003	0.6536	0.0662	2.3200e-003	0.0685		24.5038	24.5038	2.5000e-004		24.5090
Worker	0.0233	0.0319	0.2978	4.6000e-004	4.8075	3.4000e-004	4.8079	0.4862	3.1000e-004	0.4865		40.7176	40.7176	2.4600e-003		40.7693
Total	0.0452	0.1635	0.5516	7.0000e-004	5.4586	2.8600e-003	5.4614	0.5524	2.6300e-003	0.5550		65.2213	65.2213	2.7100e-003		65.2783

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6690	1.8707	5.0237	7.5500e-003		0.4175	0.4175		0.3844	0.3844	0.0000	795.9397	795.9397	0.2325		800.8213
Total	0.6690	1.8707	5.0237	7.5500e-003		0.4175	0.4175		0.3844	0.3844	0.0000	795.9397	795.9397	0.2325		800.8213

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0219	0.1317	0.2538	2.4000e-004	6.4000e-003	2.5200e-003	8.9200e-003	1.8500e-003	2.3200e-003	4.1600e-003		24.5038	24.5038	2.5000e-004		24.5090
Worker	0.0233	0.0319	0.2978	4.6000e-004	0.0389	3.4000e-004	0.0393	0.0104	3.1000e-004	0.0107		40.7176	40.7176	2.4600e-003		40.7693
Total	0.0452	0.1635	0.5516	7.0000e-004	0.0453	2.8600e-003	0.0482	0.0122	2.6300e-003	0.0148		65.2213	65.2213	2.7100e-003		65.2783

3.8 Pond 1 Demo - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000

Appendix A

Off-Road	0.8566	7.5967	4.5159	6.8700e-003		0.5264	0.5264		0.5015	0.5015		693.2521	693.2521	0.1522		696.4489
Total	0.8566	7.5967	4.5159	6.8700e-003	0.0577	0.5264	0.5840	8.7300e-003	0.5015	0.5102		693.2521	693.2521	0.1522		696.4489

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.7200e-003	0.0375	0.0439	8.0000e-005	0.1783	6.5000e-004	0.1789	0.0181	6.0000e-004	0.0187		7.6823	7.6823	7.0000e-005		7.6838
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0503	0.1012	0.6396	1.0000e-003	9.7933	1.3200e-003	9.7947	0.9904	1.2100e-003	0.9917		89.1175	89.1175	4.9900e-003		89.2223

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.8566	7.5967	4.5159	6.8700e-003		0.5264	0.5264		0.5015	0.5015	0.0000	693.2521	693.2521	0.1522		696.4489
Total	0.8566	7.5967	4.5159	6.8700e-003	0.0577	0.5264	0.5840	8.7300e-003	0.5015	0.5102	0.0000	693.2521	693.2521	0.1522		696.4489

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.7200e-003	0.0375	0.0439	8.0000e-005	1.6700e-003	6.5000e-004	2.3200e-003	4.6000e-004	6.0000e-004	1.0600e-003		7.6823	7.6823	7.0000e-005		7.6838
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0503	0.1012	0.6396	1.0000e-003	0.0795	1.3200e-003	0.0809	0.0212	1.2100e-003	0.0224		89.1175	89.1175	4.9900e-003		89.2223

3.9 Pond 1 MLE Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6730	6.6455	3.9559	5.5300e-003		0.4538	0.4538		0.4181	0.4181		574.6983	574.6983	0.1650		578.1640
Total	0.6730	6.6455	3.9559	5.5300e-003		0.4538	0.4538		0.4181	0.4181		574.6983	574.6983	0.1650		578.1640

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0438	0.2633	0.5075	4.8000e-004	1.3021	5.0400e-003	1.3071	0.1323	4.6300e-003	0.1370		49.0075	49.0075	5.0000e-004		49.0181
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0903	0.3270	1.1032	1.4000e-003	10.9171	5.7100e-003	10.9229	1.1047	5.2400e-003	1.1099		130.4427	130.4427	5.4200e-003		130.5566

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6730	5.5839	3.9559	5.5300e-003		0.4538	0.4538		0.4181	0.4181	0.0000	574.6983	574.6983	0.1650		578.1640
Total	0.6730	5.5839	3.9559	5.5300e-003		0.4538	0.4538		0.4181	0.4181	0.0000	574.6983	574.6983	0.1650		578.1640

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0438	0.2633	0.5075	4.8000e-004	0.0128	5.0400e-003	0.0179	3.6900e-003	4.6300e-003	8.3200e-003		49.0075	49.0075	5.0000e-004		49.0181
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0903	0.3270	1.1032	1.4000e-003	0.0907	5.7100e-003	0.0964	0.0244	5.2400e-003	0.0297		130.4427	130.4427	5.4200e-003		130.5566

3.10 Internal Piping to Pond 2 - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6576	7.2152	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720		787.9395	787.9395	0.2324		792.8206
Total	0.6576	7.2152	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720		787.9395	787.9395	0.2324		792.8206

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0197	0.1127	0.2384	2.4000e-004	0.6511	1.9200e-003	0.6530	0.0662	1.7600e-003	0.0679		24.1922	24.1922	2.2000e-004		24.1968
Worker	0.0205	0.0282	0.2614	4.6000e-004	4.8075	3.1000e-004	4.8078	0.4862	2.8000e-004	0.4865		39.3061	39.3061	2.2200e-003		39.3527
Total	0.0402	0.1408	0.4998	7.0000e-004	5.4586	2.2300e-003	5.4608	0.5524	2.0400e-003	0.5544		63.4983	63.4983	2.4400e-003		63.5495

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6576	1.8207	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720	0.0000	787.9395	787.9395	0.2324		792.8206
Total	0.6576	1.8207	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720	0.0000	787.9395	787.9395	0.2324		792.8206

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0197	0.1127	0.2384	2.4000e-004	6.4000e-003	1.9200e-003	8.3200e-003	1.8500e-003	1.7600e-003	3.6100e-003		24.1922	24.1922	2.2000e-004		24.1968
Worker	0.0205	0.0282	0.2614	4.6000e-004	0.0389	3.1000e-004	0.0392	0.0104	2.8000e-004	0.0107		39.3061	39.3061	2.2200e-003		39.3527
Total	0.0402	0.1408	0.4998	7.0000e-004	0.0453	2.2300e-003	0.0476	0.0122	2.0400e-003	0.0143		63.4983	63.4983	2.4400e-003		63.5495

3.11 Pond 2 Demo - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000

Appendix A

Off-Road	0.5252	5.2084	2.8219	4.4600e-003		0.3181	0.3181		0.2939	0.2939		451.2686	451.2686	0.1235		453.8628
Total	0.5252	5.2084	2.8219	4.4600e-003	0.0577	0.3181	0.3757	8.7300e-003	0.2939	0.3027		451.2686	451.2686	0.1235		453.8628

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4000e-003	0.0318	0.0415	7.0000e-005	0.1783	4.9000e-004	0.1788	0.0181	4.6000e-004	0.0185		7.5835	7.5835	6.0000e-005		7.5848
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0564	0.5229	9.2000e-004	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0444	0.0881	0.5644	9.9000e-004	9.7933	1.1100e-003	9.7945	0.9904	1.0300e-003	0.9915		86.1958	86.1958	4.5000e-003		86.2902

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.5252	5.2084	2.8219	4.4600e-003		0.3181	0.3181		0.2939	0.2939	0.0000	451.2686	451.2686	0.1235		453.8628
Total	0.5252	5.2084	2.8219	4.4600e-003	0.0577	0.3181	0.3757	8.7300e-003	0.2939	0.3027	0.0000	451.2686	451.2686	0.1235		453.8628

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4000e-003	0.0318	0.0415	7.0000e-005	1.6700e-003	4.9000e-004	2.1600e-003	4.6000e-004	4.6000e-004	9.1000e-004		7.5835	7.5835	6.0000e-005		7.5848
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0564	0.5229	9.2000e-004	0.0779	6.2000e-004	0.0785	0.0207	5.7000e-004	0.0213		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0444	0.0881	0.5644	9.9000e-004	0.0795	1.1100e-003	0.0807	0.0212	1.0300e-003	0.0222		86.1958	86.1958	4.5000e-003		86.2902

3.12 Pond 2 MLE Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6571	6.4255	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047		568.9791	568.9791	0.1650		572.4429
Total	0.6571	6.4255	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047		568.9791	568.9791	0.1650		572.4429

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	0.2253	0.4768	4.8000e-004	1.3021	3.8400e-003	1.3059	0.1323	3.5200e-003	0.1359		48.3844	48.3844	4.3000e-004		48.3935
Worker	0.0410	0.0564	0.5229	9.2000e-004	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0803	0.2817	0.9997	1.4000e-003	10.9171	4.4600e-003	10.9216	1.1047	4.0900e-003	1.1088		126.9966	126.9966	4.8700e-003		127.0990

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6571	5.4148	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047	0.0000	568.9791	568.9791	0.1650		572.4429
Total	0.6571	5.4148	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047	0.0000	568.9791	568.9791	0.1650		572.4429

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	0.2253	0.4768	4.8000e-004	0.0128	3.8400e-003	0.0166	3.6900e-003	3.5200e-003	7.2200e-003		48.3844	48.3844	4.3000e-004		48.3935
Worker	0.0410	0.0564	0.5229	9.2000e-004	0.0779	6.2000e-004	0.0785	0.0207	5.7000e-004	0.0213		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0803	0.2817	0.9997	1.4000e-003	0.0907	4.4600e-003	0.0951	0.0244	4.0900e-003	0.0285		126.9966	126.9966	4.8700e-003		127.0990

3.13 Internal Piping to Pond 3 - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6576	7.2152	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720		787.9395	787.9395	0.2324		792.8206
Total	0.6576	7.2152	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720		787.9395	787.9395	0.2324		792.8206

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0197	0.1127	0.2384	2.4000e-004	0.6511	1.9200e-003	0.6530	0.0662	1.7600e-003	0.0679		24.1922	24.1922	2.2000e-004		24.1968
Worker	0.0205	0.0282	0.2614	4.6000e-004	4.8075	3.1000e-004	4.8078	0.4862	2.8000e-004	0.4865		39.3061	39.3061	2.2200e-003		39.3527
Total	0.0402	0.1408	0.4998	7.0000e-004	5.4586	2.2300e-003	5.4608	0.5524	2.0400e-003	0.5544		63.4983	63.4983	2.4400e-003		63.5495

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6576	1.8207	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720	0.0000	787.9395	787.9395	0.2324		792.8206
Total	0.6576	1.8207	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720	0.0000	787.9395	787.9395	0.2324		792.8206

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0197	0.1127	0.2384	2.4000e-004	6.4000e-003	1.9200e-003	8.3200e-003	1.8500e-003	1.7600e-003	3.6100e-003		24.1922	24.1922	2.2000e-004		24.1968
Worker	0.0205	0.0282	0.2614	4.6000e-004	0.0389	3.1000e-004	0.0392	0.0104	2.8000e-004	0.0107		39.3061	39.3061	2.2200e-003		39.3527
Total	0.0402	0.1408	0.4998	7.0000e-004	0.0453	2.2300e-003	0.0476	0.0122	2.0400e-003	0.0143		63.4983	63.4983	2.4400e-003		63.5495

3.14 Pond 3 Demo - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000

Appendix A

Off-Road	0.5252	5.2084	2.8219	4.4600e-003		0.3181	0.3181		0.2939	0.2939		451.2686	451.2686	0.1235		453.8628
Total	0.5252	5.2084	2.8219	4.4600e-003	0.0577	0.3181	0.3757	8.7300e-003	0.2939	0.3027		451.2686	451.2686	0.1235		453.8628

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4000e-003	0.0318	0.0415	7.0000e-005	0.1783	4.9000e-004	0.1788	0.0181	4.6000e-004	0.0185		7.5835	7.5835	6.0000e-005		7.5848
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0564	0.5229	9.2000e-004	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0444	0.0881	0.5644	9.9000e-004	9.7933	1.1100e-003	9.7945	0.9904	1.0300e-003	0.9915		86.1958	86.1958	4.5000e-003		86.2902

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.5252	5.2084	2.8219	4.4600e-003		0.3181	0.3181		0.2939	0.2939	0.0000	451.2686	451.2686	0.1235		453.8628
Total	0.5252	5.2084	2.8219	4.4600e-003	0.0577	0.3181	0.3757	8.7300e-003	0.2939	0.3027	0.0000	451.2686	451.2686	0.1235		453.8628

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4000e-003	0.0318	0.0415	7.0000e-005	1.6700e-003	4.9000e-004	2.1600e-003	4.6000e-004	4.6000e-004	9.1000e-004		7.5835	7.5835	6.0000e-005		7.5848
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0564	0.5229	9.2000e-004	0.0779	6.2000e-004	0.0785	0.0207	5.7000e-004	0.0213		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0444	0.0881	0.5644	9.9000e-004	0.0795	1.1100e-003	0.0807	0.0212	1.0300e-003	0.0222		86.1958	86.1958	4.5000e-003		86.2902

3.15 Pond 3 MLE Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6571	6.4255	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047		568.9791	568.9791	0.1650		572.4429
Total	0.6571	6.4255	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047		568.9791	568.9791	0.1650		572.4429

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	0.2253	0.4768	4.8000e-004	1.3021	3.8400e-003	1.3059	0.1323	3.5200e-003	0.1359		48.3844	48.3844	4.3000e-004		48.3935
Worker	0.0410	0.0564	0.5229	9.2000e-004	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0803	0.2817	0.9997	1.4000e-003	10.9171	4.4600e-003	10.9216	1.1047	4.0900e-003	1.1088		126.9966	126.9966	4.8700e-003		127.0990

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6571	5.4148	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047	0.0000	568.9791	568.9791	0.1650		572.4429
Total	0.6571	5.4148	3.9453	5.5300e-003		0.4392	0.4392		0.4047	0.4047	0.0000	568.9791	568.9791	0.1650		572.4429

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	0.2253	0.4768	4.8000e-004	0.0128	3.8400e-003	0.0166	3.6900e-003	3.5200e-003	7.2200e-003		48.3844	48.3844	4.3000e-004		48.3935
Worker	0.0410	0.0564	0.5229	9.2000e-004	0.0779	6.2000e-004	0.0785	0.0207	5.7000e-004	0.0213		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0803	0.2817	0.9997	1.4000e-003	0.0907	4.4600e-003	0.0951	0.0244	4.0900e-003	0.0285		126.9966	126.9966	4.8700e-003		127.0990

3.16 Internal Piping to Pond 4 - 2015**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6576	7.2152	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720		787.9395	787.9395	0.2324		792.8206
Total	0.6576	7.2152	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720		787.9395	787.9395	0.2324		792.8206

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0197	0.1127	0.2384	2.4000e-004	0.6511	1.9200e-003	0.6530	0.0662	1.7600e-003	0.0679		24.1922	24.1922	2.2000e-004		24.1968
Worker	0.0205	0.0282	0.2614	4.6000e-004	4.8075	3.1000e-004	4.8078	0.4862	2.8000e-004	0.4865		39.3061	39.3061	2.2200e-003		39.3527
Total	0.0402	0.1408	0.4998	7.0000e-004	5.4586	2.2300e-003	5.4608	0.5524	2.0400e-003	0.5544		63.4983	63.4983	2.4400e-003		63.5495

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6576	1.8207	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720	0.0000	787.9395	787.9395	0.2324		792.8206
Total	0.6576	1.8207	5.0404	7.5500e-003		0.4039	0.4039		0.3720	0.3720	0.0000	787.9395	787.9395	0.2324		792.8206

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0197	0.1127	0.2384	2.4000e-004	6.4000e-003	1.9200e-003	8.3200e-003	1.8500e-003	1.7600e-003	3.6100e-003		24.1922	24.1922	2.2000e-004		24.1968
Worker	0.0205	0.0282	0.2614	4.6000e-004	0.0389	3.1000e-004	0.0392	0.0104	2.8000e-004	0.0107		39.3061	39.3061	2.2200e-003		39.3527
Total	0.0402	0.1408	0.4998	7.0000e-004	0.0453	2.2300e-003	0.0476	0.0122	2.0400e-003	0.0143		63.4983	63.4983	2.4400e-003		63.5495

3.17 Pond 4 Demo - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000

Appendix A

Off-Road	0.5252	5.2084	2.8219	4.4600e-003		0.3181	0.3181		0.2939	0.2939		451.2686	451.2686	0.1235		453.8628
Total	0.5252	5.2084	2.8219	4.4600e-003	0.0577	0.3181	0.3757	8.7300e-003	0.2939	0.3027		451.2686	451.2686	0.1235		453.8628

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4000e-003	0.0318	0.0415	7.0000e-005	0.1783	4.9000e-004	0.1788	0.0181	4.6000e-004	0.0185		7.5835	7.5835	6.0000e-005		7.5848
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0564	0.5229	9.2000e-004	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0444	0.0881	0.5644	9.9000e-004	9.7933	1.1100e-003	9.7945	0.9904	1.0300e-003	0.9915		86.1958	86.1958	4.5000e-003		86.2902

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0577	0.0000	0.0577	8.7300e-003	0.0000	8.7300e-003			0.0000			0.0000
Off-Road	0.5252	5.2084	2.8219	4.4600e-003		0.3181	0.3181		0.2939	0.2939	0.0000	451.2686	451.2686	0.1235		453.8628
Total	0.5252	5.2084	2.8219	4.4600e-003	0.0577	0.3181	0.3757	8.7300e-003	0.2939	0.3027	0.0000	451.2686	451.2686	0.1235		453.8628

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4000e-003	0.0318	0.0415	7.0000e-005	1.6700e-003	4.9000e-004	2.1600e-003	4.6000e-004	4.6000e-004	9.1000e-004		7.5835	7.5835	6.0000e-005		7.5848
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0564	0.5229	9.2000e-004	0.0779	6.2000e-004	0.0785	0.0207	5.7000e-004	0.0213		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0444	0.0881	0.5644	9.9000e-004	0.0795	1.1100e-003	0.0807	0.0212	1.0300e-003	0.0222		86.1958	86.1958	4.5000e-003		86.2902

3.18 Pond 4 MLE Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6582	6.4395	3.9541	5.5400e-003		0.4399	0.4399		0.4053	0.4053		570.4112	570.4112	0.1654		573.8840
Total	0.6582	6.4395	3.9541	5.5400e-003		0.4399	0.4399		0.4053	0.4053		570.4112	570.4112	0.1654		573.8840

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Appendix A

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	0.2253	0.4768	4.8000e-004	1.3021	3.8400e-003	1.3059	0.1323	3.5200e-003	0.1359		48.3844	48.3844	4.3000e-004		48.3935
Worker	0.0410	0.0564	0.5229	9.2000e-004	9.6151	6.2000e-004	9.6157	0.9724	5.7000e-004	0.9729		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0803	0.2817	0.9997	1.4000e-003	10.9171	4.4600e-003	10.9216	1.1047	4.0900e-003	1.1088		126.9966	126.9966	4.8700e-003		127.0990

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6582	5.4148	3.9541	5.5400e-003		0.4399	0.4399		0.4053	0.4053	0.0000	570.4112	570.4112	0.1654		573.8840
Total	0.6582	5.4148	3.9541	5.5400e-003		0.4399	0.4399		0.4053	0.4053	0.0000	570.4112	570.4112	0.1654		573.8840

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0393	0.2253	0.4768	4.8000e-004	0.0128	3.8400e-003	0.0166	3.6900e-003	3.5200e-003	7.2200e-003		48.3844	48.3844	4.3000e-004		48.3935
Worker	0.0410	0.0564	0.5229	9.2000e-004	0.0779	6.2000e-004	0.0785	0.0207	5.7000e-004	0.0213		78.6123	78.6123	4.4400e-003		78.7055
Total	0.0803	0.2817	0.9997	1.4000e-003	0.0907	4.4600e-003	0.0951	0.0244	4.0900e-003	0.0285		126.9966	126.9966	4.8700e-003		127.0990

Soil Treatment of Settling Ponds

Yolo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	2.20	96,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	54
Climate Zone	2			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Typical settlement pond size at the site is 48,000 square feet with two ponds being treated.

Construction Phase - For two ponds staggered construction

Off-road Equipment -

Off-road Equipment - Equipment for simultaneous compacting and finish grading of completed cement areas

Off-road Equipment -

Off-road Equipment - Assumed same as construction of ramp

Off-road Equipment - Rough Grade Site equipment

Off-road Equipment - Spreading and mixing cement equipment

Off-road Equipment - Equipment for spread & mix lime

Trips and VMT - Worker trips per modified equipment lists

Grading - Pond size consistency

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	4.00
tblConstructionPhase	NumDays	6.00	13.00
tblConstructionPhase	NumDays	6.00	10.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	10.00	8.00
tblConstructionPhase	NumDays	3.00	2.00
tblConstructionPhase	NumDays	3.00	5.00
tblConstructionPhase	PhaseEndDate	8/15/2014	7/29/2014
tblConstructionPhase	PhaseEndDate	8/22/2014	8/8/2014
tblConstructionPhase	PhaseEndDate	8/15/2014	8/14/2014
tblConstructionPhase	PhaseStartDate	8/8/2014	7/22/2014
tblConstructionPhase	PhaseStartDate	8/13/2014	7/30/2014
tblConstructionPhase	PhaseStartDate	8/9/2014	8/13/2014
tblGrading	AcresOfGrading	1.00	2.50
tblGrading	MaterialImported	0.00	1,389.00
tblLandUse	LandUseSquareFeet	0.00	96,000.00
tblLandUse	LotAcreage	0.00	2.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Finish Grade Pond
tblOffRoadEquipment	PhaseName		Finish Grade Pond

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.0224	0.2371	0.1511	2.0000e-004	0.1285	0.0130	0.1415	0.0158	0.0120	0.0277	0.0000	18.7309	18.7309	5.1800e-003	0.0000	18.8397
Total	0.0224	0.2371	0.1511	2.0000e-004	0.1285	0.0130	0.1415	0.0158	0.0120	0.0277	0.0000	18.7309	18.7309	5.1800e-003	0.0000	18.8397

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.0224	0.2371	0.1511	2.0000e-004	9.8300e-003	0.0130	0.0228	3.9100e-003	0.0120	0.0159	0.0000	18.7309	18.7309	5.1800e-003	0.0000	18.8397
Total	0.0224	0.2371	0.1511	2.0000e-004	9.8300e-003	0.0130	0.0228	3.9100e-003	0.0120	0.0159	0.0000	18.7309	18.7309	5.1800e-003	0.0000	18.8397

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	92.35	0.00	83.86	75.17	0.00	42.71	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Build Access Ramp & Strip Site	Site Preparation	7/14/2014	7/15/2014	5	2	
2	Rough Grade Site	Grading	7/16/2014	7/21/2014	5	4	
3	Lime and Cement Delivery	Grading	7/22/2014	8/7/2014	5	13	
4	Spread & Mix Lime	Paving	7/22/2014	7/29/2014	5	6	
5	Finish Grade Pond	Grading	7/30/2014	8/12/2014	5	10	
6	Spread & Mix Cement	Paving	7/30/2014	8/8/2014	5	8	
7	Remove Ramp & Cleanup	Site Preparation	8/13/2014	8/14/2014	5	5	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Build Access Ramp & Strip Site	Graders	1	8.00	174	0.41
Build Access Ramp & Strip Site	Scrapers	1	8.00	361	0.48
Build Access Ramp & Strip Site	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Rough Grade Site	Graders	1	8.00	174	0.41
Rough Grade Site	Rubber Tired Dozers	1	8.00	255	0.40
Rough Grade Site	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Spread & Mix Lime	Cement and Mortar Mixers	1	8.00	9	0.56
Spread & Mix Lime	Pavers	1	8.00	125	0.42
Spread & Mix Lime	Paving Equipment	1	8.00	130	0.36
Spread & Mix Lime	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Finish Grade Pond	Plate Compactors	1	8.00	8	0.43
Finish Grade Pond	Rollers	1	8.00	80	0.38
Spread & Mix Cement	Cement and Mortar Mixers	1	8.00	9	0.56

Appendix A

Spread & Mix Cement	Pavers	1	8.00	125	0.42
Spread & Mix Cement	Paving Equipment	1	8.00	130	0.36
Spread & Mix Cement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Remove Ramp & Cleanup	Graders	1	8.00	174	0.41
Remove Ramp & Cleanup	Scrapers	1	8.00	361	0.48
Remove Ramp & Cleanup	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Build Access Ramp & Strip Site	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grade Site	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Lime and Cement Delivery				0.00	10.80	7.30				
Spread & Mix Lime	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Finish Grade Pond	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Spread & Mix Cement	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Remove Ramp & Cleanup	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Build Access Ramp & Strip Site - 2014

Unmitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0331	0.0190	2.0000e-005		1.6300e-003	1.6300e-003		1.5000e-003	1.5000e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139
Total	2.8500e-003	0.0331	0.0190	2.0000e-005	8.0000e-004	1.6300e-003	2.4300e-003	9.0000e-005	1.5000e-003	1.5900e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.5600e-003	0.0000	6.5600e-003	6.6000e-004	0.0000	6.7000e-004	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609
Total	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.5600e-003	0.0000	6.5600e-003	6.6000e-004	0.0000	6.7000e-004	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0331	0.0190	2.0000e-005		1.6300e-003	1.6300e-003		1.5000e-003	1.5000e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139
Total	2.8500e-003	0.0331	0.0190	2.0000e-005	8.0000e-004	1.6300e-003	2.4300e-003	9.0000e-005	1.5000e-003	1.5900e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609
Total	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609

3.3 Rough Grade Site - 2014

Unmitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.3500e-003	0.0000	7.3500e-003	3.4500e-003	0.0000	3.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0571	0.0364	4.0000e-005		3.0700e-003	3.0700e-003		2.8200e-003	2.8200e-003	0.0000	3.4431	3.4431	1.0200e-003	0.0000	3.4645
Total	5.3200e-003	0.0571	0.0364	4.0000e-005	7.3500e-003	3.0700e-003	0.0104	3.4500e-003	2.8200e-003	6.2700e-003	0.0000	3.4431	3.4431	1.0200e-003	0.0000	3.4645

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.1000e-004	1.1300e-003	0.0000	0.0164	0.0000	0.0164	1.6600e-003	0.0000	1.6600e-003	0.0000	0.1519	0.1519	1.0000e-005	0.0000	0.1521
Total	9.0000e-005	1.1000e-004	1.1300e-003	0.0000	0.0164	0.0000	0.0164	1.6600e-003	0.0000	1.6600e-003	0.0000	0.1519	0.1519	1.0000e-005	0.0000	0.1521

Mitigated Construction On-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.3500e-003	0.0000	7.3500e-003	3.4500e-003	0.0000	3.4500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3200e-003	0.0571	0.0364	4.0000e-005		3.0700e-003	3.0700e-003		2.8200e-003	2.8200e-003	0.0000	3.4431	3.4431	1.0200e-003	0.0000	3.4645
Total	5.3200e-003	0.0571	0.0364	4.0000e-005	7.3500e-003	3.0700e-003	0.0104	3.4500e-003	2.8200e-003	6.2700e-003	0.0000	3.4431	3.4431	1.0200e-003	0.0000	3.4645

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.1000e-004	1.1300e-003	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1519	0.1519	1.0000e-005	0.0000	0.1521
Total	9.0000e-005	1.1000e-004	1.1300e-003	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1519	0.1519	1.0000e-005	0.0000	0.1521

3.4 Lime and Cement Delivery - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.5 Spread & Mix Lime - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7100e-003	0.0406	0.0245	4.0000e-005		2.2900e-003	2.2900e-003		2.1100e-003	2.1100e-003	0.0000	3.4977	3.4977	1.0100e-003	0.0000	3.5188
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.7100e-003	0.0406	0.0245	4.0000e-005		2.2900e-003	2.2900e-003		2.1100e-003	2.1100e-003	0.0000	3.4977	3.4977	1.0100e-003	0.0000	3.5188

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.7000e-004	1.6900e-003	0.0000	0.0246	0.0000	0.0246	2.4900e-003	0.0000	2.4900e-003	0.0000	0.2279	0.2279	1.0000e-005	0.0000	0.2282
Total	1.3000e-004	1.7000e-004	1.6900e-003	0.0000	0.0246	0.0000	0.0246	2.4900e-003	0.0000	2.4900e-003	0.0000	0.2279	0.2279	1.0000e-005	0.0000	0.2282

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7100e-003	0.0406	0.0245	4.0000e-005		2.2900e-003	2.2900e-003		2.1100e-003	2.1100e-003	0.0000	3.4977	3.4977	1.0100e-003	0.0000	3.5188
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.7100e-003	0.0406	0.0245	4.0000e-005		2.2900e-003	2.2900e-003		2.1100e-003	2.1100e-003	0.0000	3.4977	3.4977	1.0100e-003	0.0000	3.5188

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.7000e-004	1.6900e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2279	0.2279	1.0000e-005	0.0000	0.2282
Total	1.3000e-004	1.7000e-004	1.6900e-003	0.0000	2.3000e-004	0.0000	2.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2279	0.2279	1.0000e-005	0.0000	0.2282

3.6 Finish Grade Pond - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0600e-003	0.0184	0.0113	2.0000e-005		1.3200e-003	1.3200e-003		1.2200e-003	1.2200e-003	0.0000	1.4181	1.4181	3.9000e-004	0.0000	1.4263
Total	2.0600e-003	0.0184	0.0113	2.0000e-005	0.0000	1.3200e-003	1.3200e-003	0.0000	1.2200e-003	1.2200e-003	0.0000	1.4181	1.4181	3.9000e-004	0.0000	1.4263

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	0.0328	0.0000	0.0328	3.3200e-003	0.0000	3.3300e-003	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043
Total	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	0.0328	0.0000	0.0328	3.3200e-003	0.0000	3.3300e-003	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0600e-003	0.0184	0.0113	2.0000e-005		1.3200e-003	1.3200e-003		1.2200e-003	1.2200e-003	0.0000	1.4181	1.4181	3.9000e-004	0.0000	1.4263
Total	2.0600e-003	0.0184	0.0113	2.0000e-005	0.0000	1.3200e-003	1.3200e-003	0.0000	1.2200e-003	1.2200e-003	0.0000	1.4181	1.4181	3.9000e-004	0.0000	1.4263

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043
Total	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043

3.7 Spread & Mix Cement - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9400e-003	0.0541	0.0327	5.0000e-005		3.0600e-003	3.0600e-003		2.8200e-003	2.8200e-003	0.0000	4.6636	4.6636	1.3400e-003	0.0000	4.6918
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.9400e-003	0.0541	0.0327	5.0000e-005		3.0600e-003	3.0600e-003		2.8200e-003	2.8200e-003	0.0000	4.6636	4.6636	1.3400e-003	0.0000	4.6918

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	0.0328	0.0000	0.0328	3.3200e-003	0.0000	3.3300e-003	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043
Total	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	0.0328	0.0000	0.0328	3.3200e-003	0.0000	3.3300e-003	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9400e-003	0.0541	0.0327	5.0000e-005		3.0600e-003	3.0600e-003		2.8200e-003	2.8200e-003	0.0000	4.6636	4.6636	1.3400e-003	0.0000	4.6918
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.9400e-003	0.0541	0.0327	5.0000e-005		3.0600e-003	3.0600e-003		2.8200e-003	2.8200e-003	0.0000	4.6636	4.6636	1.3400e-003	0.0000	4.6918

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043
Total	1.8000e-004	2.3000e-004	2.2600e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3039	0.3039	2.0000e-005	0.0000	0.3043

3.8 Remove Ramp & Cleanup - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0331	0.0190	2.0000e-005		1.6300e-003	1.6300e-003		1.5000e-003	1.5000e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139
Total	2.8500e-003	0.0331	0.0190	2.0000e-005	3.2000e-004	1.6300e-003	1.9500e-003	3.0000e-005	1.5000e-003	1.5300e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.5600e-003	0.0000	6.5600e-003	6.6000e-004	0.0000	6.7000e-004	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609
Total	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.5600e-003	0.0000	6.5600e-003	6.6000e-004	0.0000	6.7000e-004	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8500e-003	0.0331	0.0190	2.0000e-005		1.6300e-003	1.6300e-003		1.5000e-003	1.5000e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139
Total	2.8500e-003	0.0331	0.0190	2.0000e-005	3.2000e-004	1.6300e-003	1.9500e-003	3.0000e-005	1.5000e-003	1.5300e-003	0.0000	2.2997	2.2997	6.8000e-004	0.0000	2.3139

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609
Total	4.0000e-005	5.0000e-005	4.5000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0608	0.0608	0.0000	0.0000	0.0609

Soil Treatment of Settling Ponds

Yolo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	2.20	96,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	6.8	Precipitation Freq (Days)	54
Climate Zone	2			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Typical settlement pond size at the site is 48,000 square feet with two ponds being treated.

Construction Phase - For two ponds staggered construction

Off-road Equipment -

Off-road Equipment - Equipment for simultaneous compacting and finish grading of completed cement areas

Off-road Equipment -

Off-road Equipment - Assumed same as construction of ramp

Off-road Equipment - Rough Grade Site equipment

Off-road Equipment - Spreading and mixing cement equipment

Off-road Equipment - Equipment for spread & mix lime

Trips and VMT - Worker trips per modified equipment lists

Grading - Pond size consistency

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	4.00
tblConstructionPhase	NumDays	6.00	13.00
tblConstructionPhase	NumDays	6.00	10.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	10.00	8.00
tblConstructionPhase	NumDays	3.00	2.00
tblConstructionPhase	NumDays	3.00	5.00
tblConstructionPhase	PhaseEndDate	8/15/2014	7/29/2014
tblConstructionPhase	PhaseEndDate	8/22/2014	8/8/2014
tblConstructionPhase	PhaseEndDate	8/15/2014	8/14/2014
tblConstructionPhase	PhaseStartDate	8/8/2014	7/22/2014
tblConstructionPhase	PhaseStartDate	8/13/2014	7/30/2014
tblConstructionPhase	PhaseStartDate	8/9/2014	8/13/2014
tblGrading	AcresOfGrading	1.00	2.50
tblGrading	MaterialImported	0.00	1,389.00
tblLandUse	LandUseSquareFeet	0.00	96,000.00
tblLandUse	LotAcreage	0.00	2.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Finish Grade Pond
tblOffRoadEquipment	PhaseName		Finish Grade Pond

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	2.8883	33.1400	19.4809	0.0246	17.3485	1.6262	18.3789	2.6990	1.4961	4.1102	0.0000	2,600.0870	2,600.0870	0.7530	0.0000	2,615.9008
Total	2.8883	33.1400	19.4809	0.0246	17.3485	1.6262	18.3789	2.6990	1.4961	4.1102	0.0000	2,600.0870	2,600.0870	0.7530	0.0000	2,615.9008

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	2.8883	33.1400	19.4809	0.0246	3.7517	1.6262	5.2856	1.7474	1.4961	3.1586	0.0000	2,600.0870	2,600.0870	0.7530	0.0000	2,615.9008
Total	2.8883	33.1400	19.4809	0.0246	3.7517	1.6262	5.2856	1.7474	1.4961	3.1586	0.0000	2,600.0870	2,600.0870	0.7530	0.0000	2,615.9008

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	78.37	0.00	71.24	35.26	0.00	23.15	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Build Access Ramp & Strip Site	Site Preparation	7/14/2014	7/15/2014	5	2	
2	Rough Grade Site	Grading	7/16/2014	7/21/2014	5	4	
3	Lime and Cement Delivery	Grading	7/22/2014	8/7/2014	5	13	
4	Spread & Mix Lime	Paving	7/22/2014	7/29/2014	5	6	
5	Finish Grade Pond	Grading	7/30/2014	8/12/2014	5	10	
6	Spread & Mix Cement	Paving	7/30/2014	8/8/2014	5	8	
7	Remove Ramp & Cleanup	Site Preparation	8/13/2014	8/14/2014	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Build Access Ramp & Strip Site	Graders	1	8.00	174	0.41
Build Access Ramp & Strip Site	Scrapers	1	8.00	361	0.48
Build Access Ramp & Strip Site	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Rough Grade Site	Graders	1	8.00	174	0.41
Rough Grade Site	Rubber Tired Dozers	1	8.00	255	0.40
Rough Grade Site	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Spread & Mix Lime	Cement and Mortar Mixers	1	8.00	9	0.56
Spread & Mix Lime	Pavers	1	8.00	125	0.42
Spread & Mix Lime	Paving Equipment	1	8.00	130	0.36
Spread & Mix Lime	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Finish Grade Pond	Plate Compactors	1	8.00	8	0.43
Finish Grade Pond	Rollers	1	8.00	80	0.38
Spread & Mix Cement	Cement and Mortar Mixers	1	8.00	9	0.56

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Spread & Mix Cement	Pavers	1	8.00	125	0.42
Spread & Mix Cement	Paving Equipment	1	8.00	130	0.36
Spread & Mix Cement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Remove Ramp & Cleanup	Graders	1	8.00	174	0.41
Remove Ramp & Cleanup	Scrapers	1	8.00	361	0.48
Remove Ramp & Cleanup	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Build Access Ramp & Strip Site	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grade Site	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Lime and Cement Delivery				0.00	10.80	7.30				
Spread & Mix Lime	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Finish Grade Pond	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Spread & Mix Cement	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Remove Ramp & Cleanup	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Build Access Ramp & Strip Site - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7954	0.0000	0.7954	0.0859	0.0000	0.0859			0.0000			0.0000
Off-Road	2.8511	33.0890	19.0044	0.0239		1.6257	1.6257		1.4956	1.4956		2,534.9389	2,534.9389	0.7491		2,550.6700

Appendix A

Total	2.8511	33.0890	19.0044	0.0239	0.7954	1.6257	2.4211	0.0859	1.4956	1.5815		2,534.9389	2,534.9389	0.7491		2,550.6700
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Appendix A

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0372	0.0510	0.4765	7.3000e-004	7.6920	5.4000e-004	7.6926	0.7779	4.9000e-004	0.7784		65.1481	65.1481	3.9400e-003		65.2308
Total	0.0372	0.0510	0.4765	7.3000e-004	7.6920	5.4000e-004	7.6926	0.7779	4.9000e-004	0.7784		65.1481	65.1481	3.9400e-003		65.2308

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7954	0.0000	0.7954	0.0859	0.0000	0.0859			0.0000			0.0000
Off-Road	2.8511	33.0890	19.0044	0.0239		1.6257	1.6257		1.4956	1.4956	0.0000	2,534.9389	2,534.9389	0.7491		2,550.6700
Total	2.8511	33.0890	19.0044	0.0239	0.7954	1.6257	2.4211	0.0859	1.4956	1.5815	0.0000	2,534.9389	2,534.9389	0.7491		2,550.6700

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0372	0.0510	0.4765	7.3000e-004	0.0623	5.4000e-004	0.0628	0.0166	4.9000e-004	0.0171		65.1481	65.1481	3.9400e-003		65.2308
Total	0.0372	0.0510	0.4765	7.3000e-004	0.0623	5.4000e-004	0.0628	0.0166	4.9000e-004	0.0171		65.1481	65.1481	3.9400e-003		65.2308

3.3 Rough Grade Site - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6739	0.0000	3.6739	1.7267	0.0000	1.7267			0.0000			0.0000
Off-Road	2.6604	28.5366	18.1810	0.0179		1.5332	1.5332		1.4106	1.4106		1,897.6910	1,897.6910	0.5608		1,909.4676
Total	2.6604	28.5366	18.1810	0.0179	3.6739	1.5332	5.2071	1.7267	1.4106	3.1372		1,897.6910	1,897.6910	0.5608		1,909.4676

Unmitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6739	0.0000	3.6739	1.7267	0.0000	1.7267			0.0000			0.0000
Off-Road	2.6604	28.5366	18.1810	0.0179		1.5332	1.5332		1.4106	1.4106	0.0000	1,897.6910	1,897.6910	0.5608		1,909.4676
Total	2.6604	28.5366	18.1810	0.0179	3.6739	1.5332	5.2071	1.7267	1.4106	3.1372	0.0000	1,897.6910	1,897.6910	0.5608		1,909.4676

Mitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385

3.4 Lime and Cement Delivery - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0415	0.0000	0.0415	6.2800e-003	0.0000	6.2800e-003			0.0000			0.0000
Total					0.0415	0.0000	0.0415	6.2800e-003	0.0000	6.2800e-003			0.0000			0.0000

Unmitigated Construction Off-Site

Appendix A

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0415	0.0000	0.0415	6.2800e-003	0.0000	6.2800e-003			0.0000			0.0000
Total					0.0415	0.0000	0.0415	6.2800e-003	0.0000	6.2800e-003			0.0000			0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

3.5 Spread & Mix Lime - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044		1,285.1719	1,285.1719	0.3702		1,292.9458
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044		1,285.1719	1,285.1719	0.3702		1,292.9458

Appendix A

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044	0.0000	1,285.1719	1,285.1719	0.3702		1,292.9458
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044	0.0000	1,285.1719	1,285.1719	0.3702		1,292.9458

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385

3.6 Finish Grade Pond - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4127	3.6776	2.2528	3.1000e-003		0.2649	0.2649		0.2445	0.2445		312.6342	312.6342	0.0858		314.4355
Total	0.4127	3.6776	2.2528	3.1000e-003	0.0000	0.2649	0.2649	0.0000	0.2445	0.2445		312.6342	312.6342	0.0858		314.4355

Appendix A

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0372	0.0510	0.4765	7.3000e-004	7.6920	5.4000e-004	7.6926	0.7779	4.9000e-004	0.7784		65.1481	65.1481	3.9400e-003		65.2308
Total	0.0372	0.0510	0.4765	7.3000e-004	7.6920	5.4000e-004	7.6926	0.7779	4.9000e-004	0.7784		65.1481	65.1481	3.9400e-003		65.2308

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4127	3.6776	2.2528	3.1000e-003		0.2649	0.2649		0.2445	0.2445	0.0000	312.6342	312.6342	0.0858		314.4355
Total	0.4127	3.6776	2.2528	3.1000e-003	0.0000	0.2649	0.2649	0.0000	0.2445	0.2445	0.0000	312.6342	312.6342	0.0858		314.4355

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0372	0.0510	0.4765	7.3000e-004	0.0623	5.4000e-004	0.0628	0.0166	4.9000e-004	0.0171		65.1481	65.1481	3.9400e-003		65.2308
Total	0.0372	0.0510	0.4765	7.3000e-004	0.0623	5.4000e-004	0.0628	0.0166	4.9000e-004	0.0171		65.1481	65.1481	3.9400e-003		65.2308

3.7 Spread & Mix Cement - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044		1,285.1719	1,285.1719	0.3702		1,292.9458
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044		1,285.1719	1,285.1719	0.3702		1,292.9458

Appendix A

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	9.6151	6.7000e-004	9.6157	0.9724	6.1000e-004	0.9730		81.4352	81.4352	4.9200e-003		81.5385

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044	0.0000	1,285.1719	1,285.1719	0.3702		1,292.9458
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2356	13.5217	8.1711	0.0124		0.7642	0.7642		0.7044	0.7044	0.0000	1,285.1719	1,285.1719	0.3702		1,292.9458

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385
Total	0.0465	0.0637	0.5957	9.2000e-004	0.0779	6.7000e-004	0.0785	0.0207	6.1000e-004	0.0214		81.4352	81.4352	4.9200e-003		81.5385

3.8 Remove Ramp & Cleanup - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3182	0.0000	0.3182	0.0344	0.0000	0.0344			0.0000			0.0000
Off-Road	2.8511	33.0890	19.0044	0.0239		1.6257	1.6257		1.4956	1.4956		2,534.9389	2,534.9389	0.7491		2,550.6700
Total	2.8511	33.0890	19.0044	0.0239	0.3182	1.6257	1.9438	0.0344	1.4956	1.5300		2,534.9389	2,534.9389	0.7491		2,550.6700

Appendix A

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0372	0.0510	0.4765	7.3000e-004	7.6920	5.4000e-004	7.6926	0.7779	4.9000e-004	0.7784		65.1481	65.1481	3.9400e-003		65.2308
Total	0.0372	0.0510	0.4765	7.3000e-004	7.6920	5.4000e-004	7.6926	0.7779	4.9000e-004	0.7784		65.1481	65.1481	3.9400e-003		65.2308

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3182	0.0000	0.3182	0.0344	0.0000	0.0344			0.0000			0.0000
Off-Road	2.8511	33.0890	19.0044	0.0239		1.6257	1.6257		1.4956	1.4956	0.0000	2,534.9389	2,534.9389	0.7491		2,550.6700
Total	2.8511	33.0890	19.0044	0.0239	0.3182	1.6257	1.9438	0.0344	1.4956	1.5300	0.0000	2,534.9389	2,534.9389	0.7491		2,550.6700

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0372	0.0510	0.4765	7.3000e-004	0.0623	5.4000e-004	0.0628	0.0166	4.9000e-004	0.0171		65.1481	65.1481	3.9400e-003		65.2308
Total	0.0372	0.0510	0.4765	7.3000e-004	0.0623	5.4000e-004	0.0628	0.0166	4.9000e-004	0.0171		65.1481	65.1481	3.9400e-003		65.2308

APPENDIX B
Biological Memorandum

November 6, 2014

Mr. Reg Murray
City of Auburn
1225 Lincoln Way
Auburn, CA 95603

Subject: Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, Biological Field Survey, City of Auburn, Placer County, CA

Dear Mr. Murray:

In October, 2014, Dudek biologist Lisa Achter conducted a biological field survey at the Auburn Wastewater Treatment Plant (WWTP) project site. The focus of the survey was to characterize the biological resources on the site and to identify potential constraints to development of the site posed by these resources. This letter report documents the methods and results of the survey and constraints analysis.

Site Location and Description

The Auburn Wastewater Treatment Plant project site is located at 10441 Ophir Road in Auburn, CA (Figure 1). The project area is mostly paved and flat with an elevation of 840 feet. The site is bounded on the north by Auburn Ravine Creek, the west and south by undeveloped woodland habitat, and the east by the remainder of the WWTP property which includes associated structures and a paved parking lot. The location corresponds to 38°53'16" north latitude and 121°06'37" west longitude.

The existing secondary treatment pond (approximately 275 feet x 75 feet) is located on the west end of a paved area of the property and is surrounded by several buildings just to the north and east, oak woodland to the west and a gravel levee to the south. A dry vegetated depression which currently serves as a treatment pond (approximately 255 feet x 775 feet) exists south of the levee where the proposed oxidation ditch and electrical building will be built (Figure 2). This treatment pond is used during peak, wet weather flows, and contains non-native weedy vegetation.

The plant is currently operating at normal capacity. In addition to improving performance and effluent quality, the proposed upgrade project will also support future capacity for planned

growth as identified in the City's General Plan. However, no increase in capacity is being implemented at this time. Improvements to the WWTP, including the proposed project, could serve a residential population of approximately 18,000 (current City population is 13,800). The secondary process upgrade improvement project will include the following: construction of a new oxidation ditch within one of the existing treatment ponds; installation of new mechanical fine screens; installation of a new alkalinity system feed system; and installation of a new influent pump system and new return sludge pump station. Additional piping will be installed within the existing facility.

Methods

A nine-quad California Natural Diversity Database (CNDDB) search and U.S. Fish and Wildlife Service (USFWS) Endangered and Threatened species search was performed prior to the field survey to obtain information about any state or federally listed species expected to be found on site. The field survey was performed on the morning of October 30, 2014, at approximately 1000. It included a "wandering" walking transect along the levee, within the dry vegetated depression and among the facilities near the current secondary treatment pond. The temperature was approximately 62°F with partly cloudy skies. Incidental observations of wildlife or wildlife sign were recorded. The vegetation on the site was characterized and dominant plant species recorded.

Results

Results of the CNDDB and USFWS search indicated sixteen special-status plant and animal species known to occur within a five-mile radius of the site, although no occurrences were recorded on or immediately adjacent to the site (Table 1). None are expected to occur on site due to lack of available natural habitat and the highly disturbed nature of the site.

Vegetation

Currently, the site is characterized by a variety of non-native grasses and weedy dicots; about a dozen mature trees (*Quercus sp.*, *Pinus sp.* and ornamentals) occur on the property immediately surrounding the project site. One ornamental pine will be removed before installation of new piping through the project site, although removal of pines is not regulated by Placer County (Figure 3).

A small (40x60 feet) feature with typical wetland vegetation (*Typhus sp.*) was observed on the far eastern end of the dry vegetated depression within the project footprint. No other wetlands or

vernal pools, or plant species that would indicate these features, were observed on the project site.

Wildlife

During the bird nesting season (February 15-August 31), raptor and songbird species commonly found in woodland and semi-open habitats could use the periphery of the site for nesting and the interior of the site for nesting (by ground-nesting species) and foraging (in the dry vegetated depression). While high-quality suitable habitat for special-status species does not occur onsite, a number of common, more urban adapted species were observed or could potentially occur in the vicinity of the project. Nine bird species were observed on, or flying over the site, including western scrub-jay (*Aphelocoma californica*), killdeer (*Charadrius vociferus*), red-tailed hawk (*Buteo jamaicensis*), white-crowned sparrow (*Zonotrichia leucophrys*), house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), bushtit (*Psaltiriparus minimus*), western bluebird (*Sialia mexicana*) and black phoebe (*Sayornis nigricans*).

The site could potentially be used as foraging habitat by common raptors such as red-tailed hawk and by songbirds such as American robin (*Turdus migratorius*).

The vegetation found on site does provide some cover for some wildlife species such as small mammals and reptiles. Reptiles such as northwestern fence lizard (*Sceloporus occidentalis occidentalis*) and small to medium sized mammals such as mice (*Microtus sp.*) and raccoon (*Procyon lotor*) may use the site for foraging, movement and cover.

CNDDDB and USFWS searches revealed one fish species that could potentially be affected by effluent from the project that flows into Auburn Ravine Creek: Central Valley steelhead (*Oncorhynchus irideus*). Surveys by CDFW in recent years have detected steelhead in this portion of Auburn Ravine Creek. However, according to Kevin Thomas (Fisheries Biologist, CDFW, November 10, 2014) actual spawning locations and the size of the population in this creek is unknown. Regardless, the quality and quantity of the effluent from the WWTP will not change due to project improvements; therefore the project will not have an impact on this species. The permitted capacity of the WWTP is an annual dry weather average of 1.67 million gallon per day (mgd), although current discharge is well below that amount, primarily due to the drought conditions.

Summary

The project site for the Wastewater Treatment Plant Secondary Process Upgrade does not provide high quality habitat for any special-status plant or animal species, and no such species are expected to breed or otherwise utilize the site, due to the availability of high quality habitat

nearby to the west and north. One small wetland feature was observed on the project site in the vegetated depression (pond) that is used during peak usage days. Because this pond is an active treatment pond that does not have a direct connection with jurisdictional waters, it is highly unlikely that this wetland feature is regulated under the Army Corps of Engineers (ACOE), CDFW and California Regional Water Quality Board (CRWQB).

Upgrades to the WWTP are not expected to result in any adverse impacts to special-status biological resources. However, the project site and oak woodland along the periphery could provide nesting habitat for native birds protected by the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Therefore, a nesting bird survey is recommended 30 days prior to the onset of any construction activity that would occur within the nesting period (February 15-August 31) to ensure any nesting birds are not interrupted by construction activity. If nesting birds are detected during surveys, a qualified biologist will determine an appropriate buffer depending on construction activities, nest location and species. If necessary, consultation with CDFW will be sought. A worker Environmental Awareness Training will be provided to workers with information regarding the possibility of nesting birds on the project site and the course of action to take should a nest be encountered during construction.

Sincerely,

Lisa Achter
Wildlife Biologist
DUDEK
lachter@dudek.com
530-217-8952

APPENDIX C

Cultural Resources

November 14, 2014

8617

Mr. Reg Murray
City of Auburn
1225 Lincoln Way
Auburn, California 95603

Subject: Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, City of Auburn, Placer County, CA

Dear Mr. Murray:

This letter documents the cultural resources inventory conducted by Dudek for the proposed Auburn Wastewater Treatment Plant project site located at 10441 Ophir Road in Auburn, California (Figure 1). The project proposes to number of secondary process upgrades of the City of Auburn's Wastewater Treatment Plan to improve performance, add process redundancy and comply with expected new permit limitations. The project area of potential effect (APE) consists of the existing Wastewater Treatment Facility boundary, located south of Auburn Ravine Creek and north of Ophir Road in Auburn California (Figure 2). The vertical APE will be less than an approximate 10 feet of subsurface disturbance. The current cultural resources investigation was conducted by Dudek in accordance with the standards and guidelines defined under the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA). This inventory included a North Central Information Center (NCIC) records search and review of previous technical studies for the treatment facility area. The City has elected to facilitate future consultation Native American representatives and organizations provided by the Native American Heritage Commission, including appointed representatives from United Auburn Indian Community (UAIC), to discuss concerns regarding potential impacts to cultural resources and to identify locations of importance to Native Americans, including archeological sites and traditional cultural properties. Inventory efforts identified one cultural resource within the project area; it will not be impacted by the current project. No cultural resources will be impacted (no historic properties affected) by the proposed project.

Mr. Reg Murray

Subject: Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, City of Auburn, Placer County, CA

REGULATORY FRAMEWORK

National Historic Preservation Act

The NHPA established the National Register of Historic Places (NRHP) and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers (SHPOs) to carry out some of the functions of the NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the NHPA directs that "[t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP." Section 106 also affords the ACHP a reasonable opportunity to comment on the undertaking (16 USC 470f).

36 Code of Federal Regulations, Part 800 (36 CFR 800) implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources with important cultural values; to determine whether or not they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating the adverse effects.

The content of 36 CFR 60.4 defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historic significance in consultation with the California SHPO to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association. The criteria for determining eligibility are essentially the same in content and order as those outlined under the California Environmental Quality Act (CEQA), but the criteria under NHPA are labeled A through D (rather than 1-4 under CEQA).

Regarding criteria A through D of Section 106, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, cultural resources, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

Mr. Reg Murray

Subject: Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, City of Auburn, Placer County, CA

- A. are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. are associated with the lives of persons significant in our past; or
- C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. have yielded or may be likely to yield, information important in prehistory or history [36 CFR 60.4].

The current cultural resources inventory is not designed to generate enough data to make eligibility recommendations on previously recorded cultural resources that are outside of the project area, or newly discovered cultural resources; such determinations are typically made during a subsequent evaluation phase (e.g., excavations at prehistoric sites). However, the survey was designed to generate enough information to provide informal assessments of eligibility to help guide management considerations.

California Environmental Quality Act

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as “any object, building, structure, site, area, or place, which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (Division I, Public Resources Code, Section 5021.1(b)).

Lead agencies have a responsibility to evaluate historical resources against the California Register criteria prior to making a finding as to a proposed project’s impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource’s significance.

Mr. Reg Murray

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The California Register is used in the consideration of historic resources relative to significance for purposes of CEQA. The California Register includes resources listed in, or formally determined eligible for some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory may be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) consisting of the following:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

NCIC RECORDS SEARCH

Staff of the North Central Information Center (NCIC) conducted a records search for the project area and a one-half mile radius surrounding the project area (Confidential Appendix A). Fifteen previous cultural resource studies have been conducted within a half mile of the project area, six of which have included at least a portion of the APE (Table 1), such that the project APE has been previously inventoried. A draft EIR was previously prepared for the project area. Preparation of this document required supporting cultural technical investigations, including intensive pedestrian survey of the project area and other inventory-level efforts.

Table 1: Previous Cultural Resource Investigations Addressing the APE

Report No.	Year	Title	Author
50	1982	A Cultural Resource Survey of the Wise Powerhouse Unit II Project Area. Final Report	Ramsey, Eleanor Mason and Brenda J. Butler
2602	1999	Archaeological Survey Report Wise Road at North Ravine Bridge	Windmiller, Ric

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Report No.	Year	Title	Author
		Replacement Project, Placer County , California	
2603	1999	Historic Property Survey Report Wise Road at North Ravine Bridge Replacement Project, Placer County , California	Windmiller, Ric
4066	1992	Archaeological Reconnaissance of the 70 Acre Auburn Wastewater Treatment Facility	Farber, Alfred
10546	2009	Cultural Resources Study for the Placer County Water Agency South Canal Intake Project, Placer County, California	Haley, Katherine and Gabriel Roark
10561	2011	Cultural Resources Inventory/Evaluation Report with a Finding of Effect of Pacific Gas and Electric Company's Drum-Spaulding Project (FERC Project No. 2310) FERC Boundary Changes, Nevada and Placer Counties, California	Manlery, Mary, HDR and DTA

One previously recorded cultural resource (P-31-003050) was identified within the project APE; however 21 archaeological sites are also recorded within the one-half mile record search radius (Confidential Appendix A). These 21 resources all consist of historical-era mines, water conveyances and other historic features; none of which have associated cultural deposits. Resource P-31-003050, consisting of a historical-era "South Canal", intersects the eastern portion of the APE. This resource will not be impacted or otherwise modified by project activities.

NAHC SACRED LANDS FILE SEARCH

On June 26, 2012, the State of California NAHC was asked to review the Sacred Lands file for information on Native American cultural resources on the proposed Regional Project site. On August 9, 2012, the NAHC responded stating that a search of the sacred land file failed to indicate the presence of Native American cultural resources in the proposed Regional Project area. An additional request to the NAHC was sent on August 24, 2012 for the newly added Turkey Creek preferred common pipeline alignment. On August 28, 2012, the NAHC responded stating that a search of the sacred land file failed to indicate the presence of Native American cultural resources in the proposed Regional Project area.

TRIBAL OUTREACH

In their responses, the NAHC also included a list of Native American individuals/organizations that may have knowledge of cultural resources in the proposed Regional Project area. Letters to these Native American individuals/organizations were sent on August 24, 2012. Contacts included the UAIC of the Auburn Rancheria, the Shingle Springs Band of Miwok Indians, the Colfax-Todds Valley Consolidated Tribe, and two individuals: Rose Enos (Maidu/Washoe) and April Wallace Moore (Nisenan). During the Notice of Preparation process for the proposed

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Regional Project EIR, a Project comment letter from the UAIC was received on June 21, 2012. The UAIC letter requested further consultation and involvement with the proposed Regional Project. After contacting her by letter in August, Ms. Moore reported that the Turkey Creek area is very sensitive for Native American cultural resources and asked to be informed if any such resources are discovered there (pers. comm, M. O'Deegan, August 30, 2012),. She also requested copies of the final cultural resource reports and a copy of the draft EIR. A letter dated September 19, 2012, from Daniel Fonseca from the Shingle Springs Band of Miwok Indians stated that the Shingle Springs Band of Miwok Indians were not aware of any known cultural resources in the proposed Regional Project APE. Mr. Fonseca requested copies of any Cultural Resource Reports and CEQA documents completed for the proposed Regional Project. Lastly, if any human remains are found during Project construction activities, Mr. Fonseca asked that he be notified and consulted.

IMPACT ANALYSIS

According to CEQA (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) and NHPA (36 CFR 60.4), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect (adverse effect) on the environment and the cultural resource itself. A substantial adverse change in the significance of an historical resource would be constituted by physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. Significance, under these management conditions, is to be interpreted in terms of the resource's eligibility for listing on the NRHP and/or CRHR.

The project APE consists of the existing Wastewater Treatment Facility boundary. The vertical APE will be less than an approximate 10 feet of subsurface disturbance. Resource P-31-003050, consisting of a historical-era "South Canal", intersects the eastern portion of the APE. This resource will not be affected or otherwise modified by planned project activities.

With the expectation that the work will proceed as defined by the current project description, there will be no significant effect to cultural resources (no historic properties affected) as a result of the implementation of the proposed project activities.

RECOMMEDATIONS

No cultural resources will be impacted (no historic properties affected) by the proposed project. Dudek's cultural resources investigation of the project area indicates that there is very low

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potential for the inadvertent discovery of cultural resources during ground breaking activities. One cultural resource is located within the project area, however it will not be impacted or otherwise modified by the proposed activities. The surrounding area is largely disturbed from development of the existing facility (which also had associated technical studies).

No further cultural efforts or mitigation, including cultural construction monitoring, are recommended in support of implementation of the current project. Should the Project be modified to involve any substantial modifications to P-31-003050, evaluation of this resource for NRHP and CRHR listing will be required by a qualified historical resource specialist prior to work proceeding. Should archaeological material be identified in the area during earth moving activities, work should be temporary halted, and the City consulted. A qualified archaeologist will be assigned to review the unanticipated find, and evaluation efforts of this resource for CRHR listing will be initiated in consultation with the City. Should human remains be discovered, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to the City and County Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.

If you have any questions about this report, please call me or Adam Giacinto at Dudek.

Respectfully Submitted,



Nicholas Hapten
Archaeologist

cc: Adam Giacinto, Dudek
Brian Grattidge, Dudek

Att: Figure 1. Regional Map
Figure 2. Vicinity Map
Appendix A: Confidential Records Search

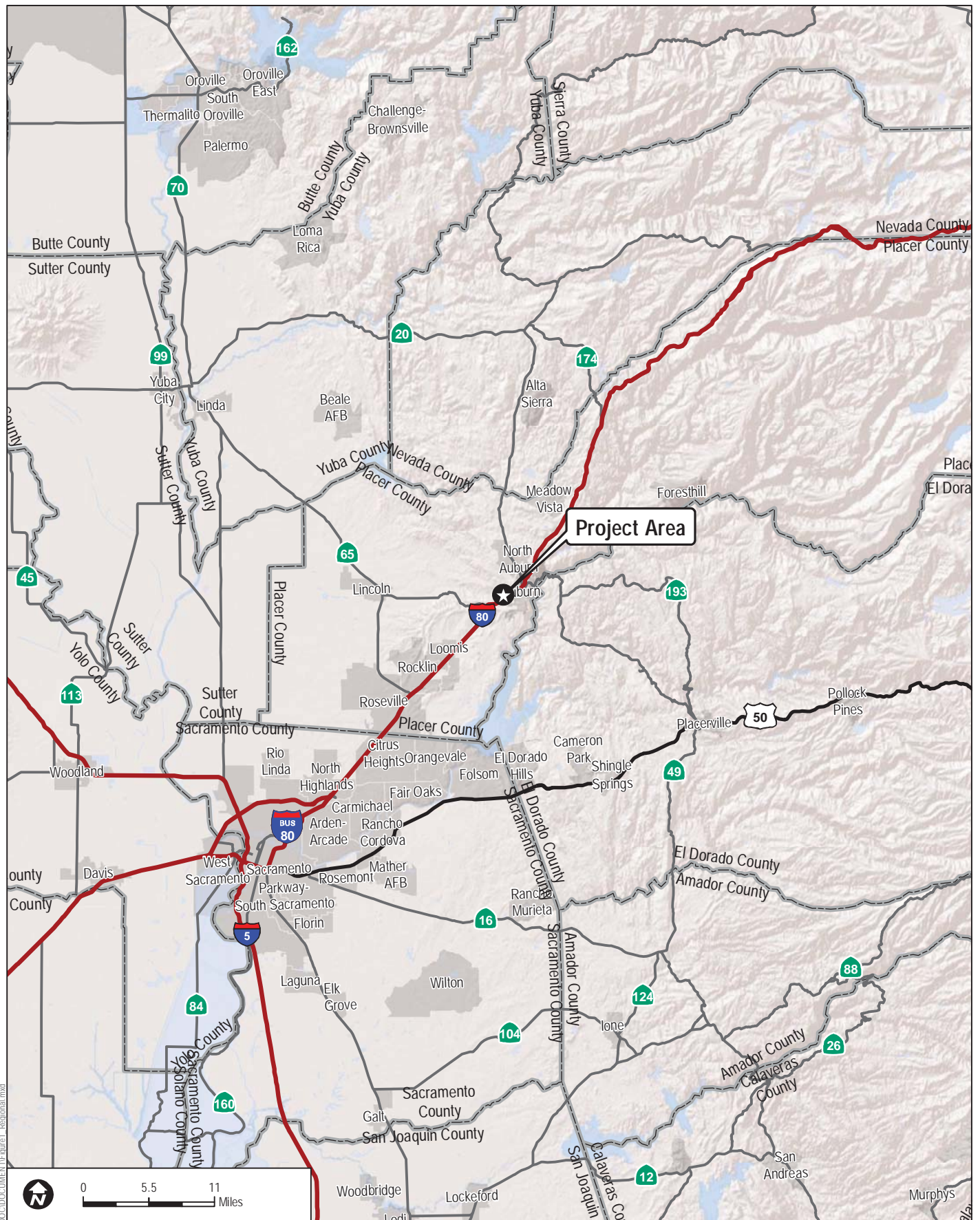
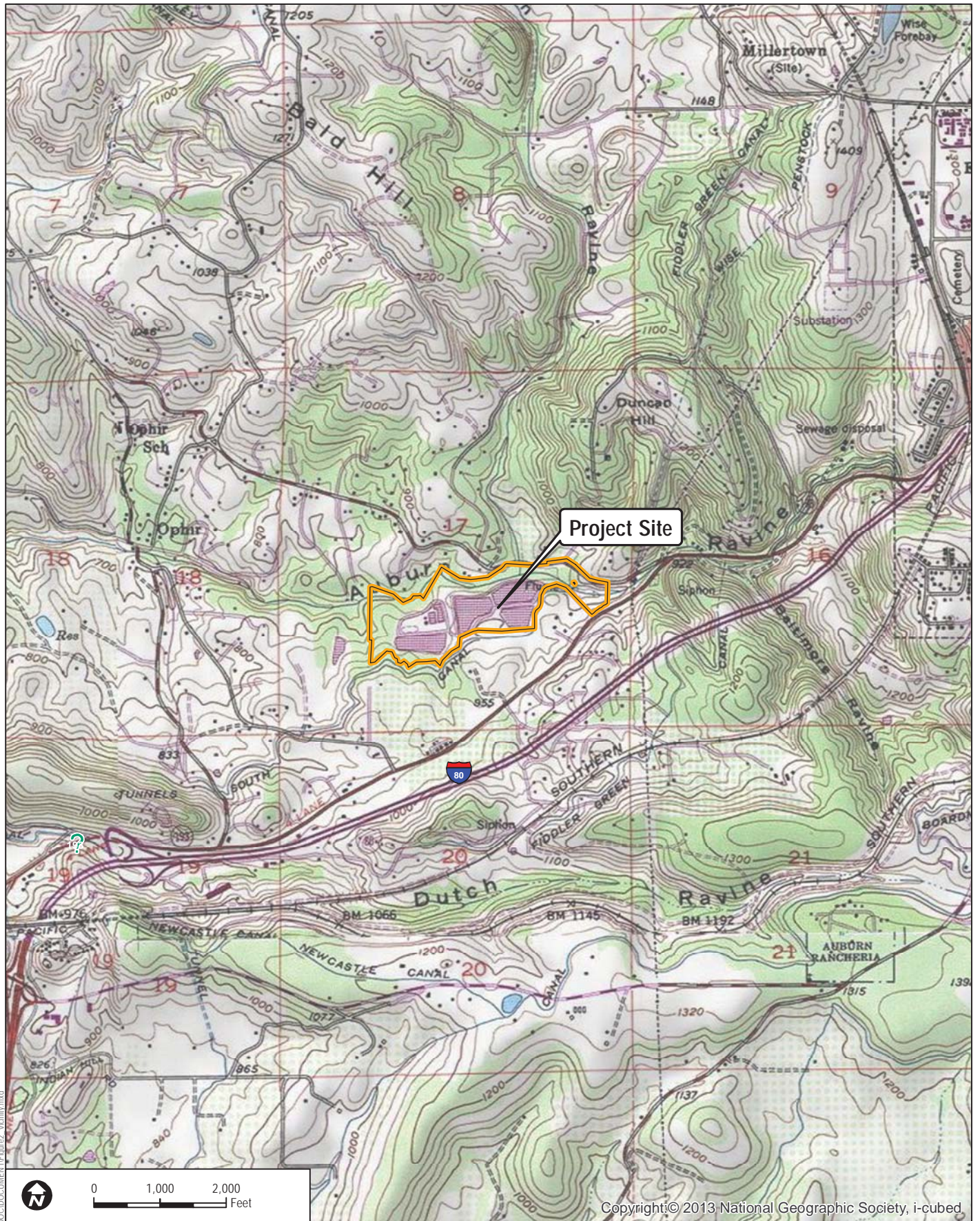


FIGURE 1
Regional Map

DUDEK

8617

AUBURN WASTEWATER TREATMENT PLANT IMPROVEMENTS PROJECT



DUDEK

8617

SOURCE: USGS 7.5-Minute Series Auburn Quadrangle.

AUBURN WASTEWATER TREATMENT PLANT IMPROVEMENTS PROJECT

FIGURE 2
Vicinity Map

APPENDIX D

Environmental Noise Assessment

Environmental Noise Assessment

Auburn Wastewater Treatment Plant

City of Auburn, California

BAC Job # 2014-291

Prepared For:

Dudek

Attn: Mr. Brian Grattidge
1225 Lincoln Way
Auburn, CA 95603

Prepared By:

Bollard Acoustical Consultants, Inc.



Paul Bollard, President

January 13, 2015



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Introduction

The City of Auburn (City) is proposing a number of plant upgrades that will improve wastewater treatment plant (WWTP) performance, add process redundancy, and comply with new permit limitations. The WWTP is located south of Wise Road, and north of Ophir Road, at the location indicated on Figure 1.

The WWTP has one oxidation ditch (a large aeration basin) that has never been taken out of service since its construction in the late 1970s. The project will construct a new oxidation ditch and associated facilities so that the existing oxidation ditch can be taken out of service for inspection and repairs. In addition, the new oxidation ditch will be designed to remove nitrogen to the levels expected in future discharge permits.

Several other new facilities are required to be constructed with the new oxidation ditch to make a complete secondary treatment process. These facilities include: (1) new mechanical fine screens to remove small plastics and hair that currently make it through the secondary process and can impact process performance, (2) a new alkalinity feed system, (3) a new influent pump station, and 4) a new return sludge pump station. As shown in Figure 2, all facilities will be constructed within the existing plant site. The new ditch will be constructed within one of the existing treatment ponds.

Existing Setting

Acoustical Fundamentals & Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by the A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Figure 1
Auburn Wastewater Treatment Plant - Auburn, California
Project Area and Noise Monitoring Locations

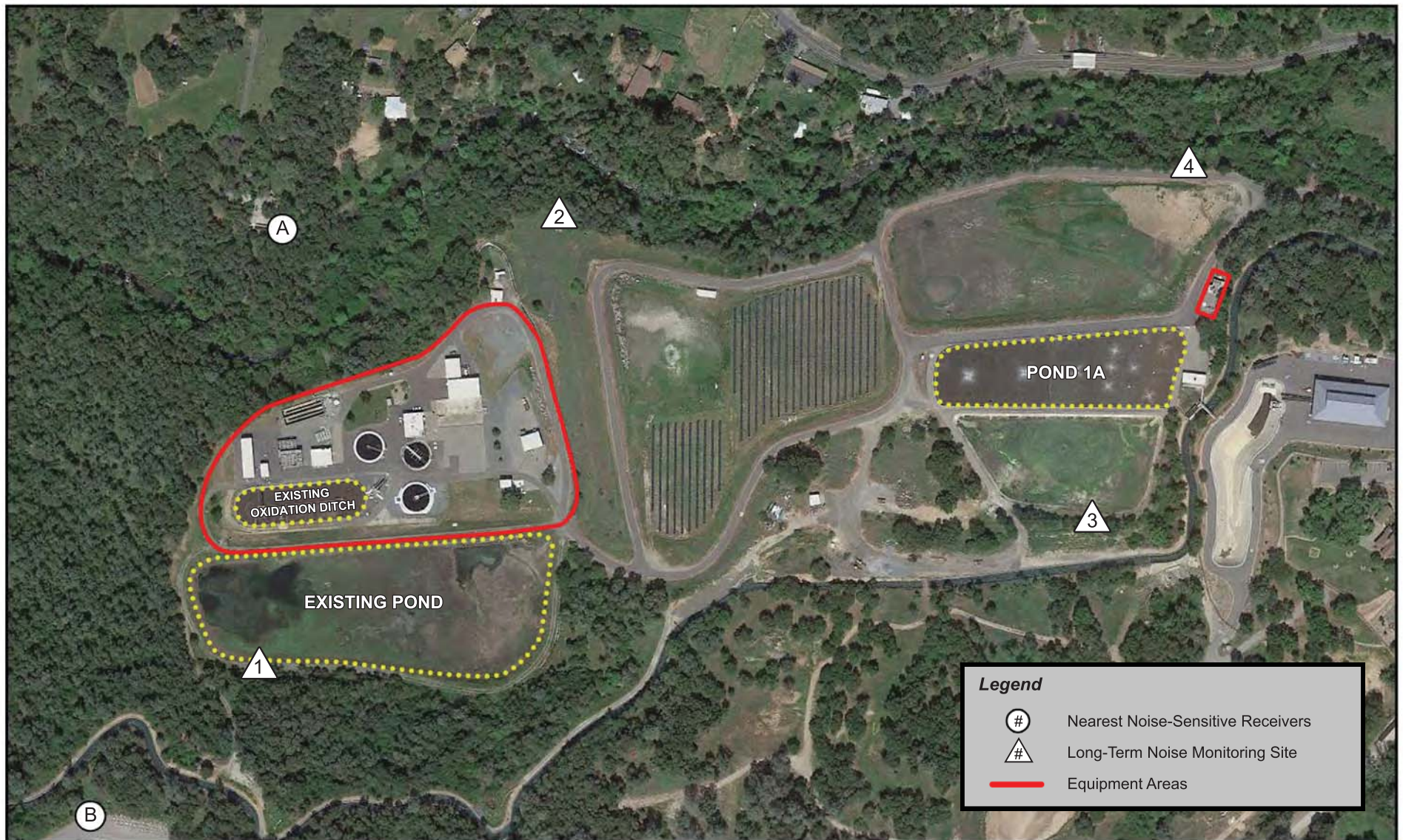
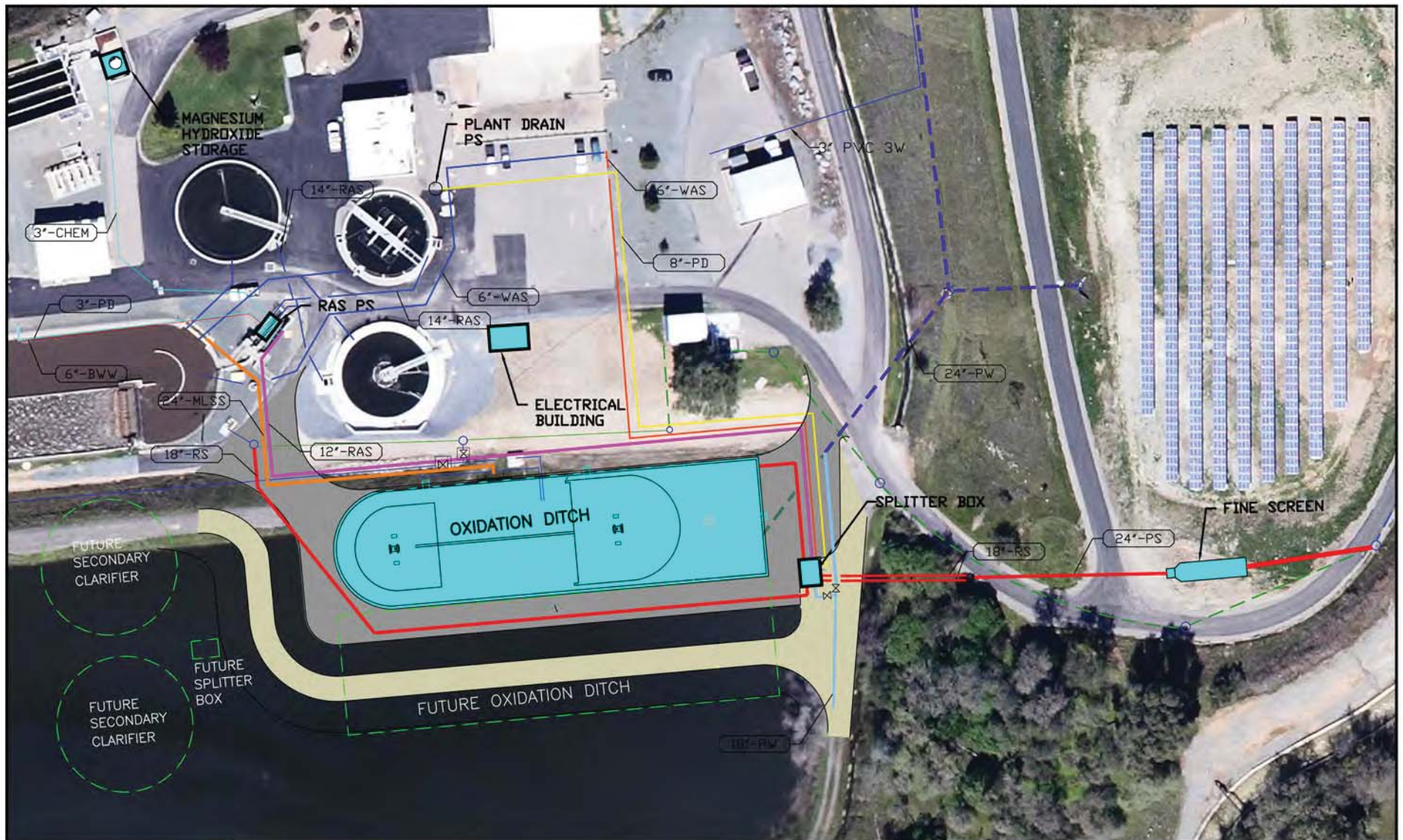


Figure 2
Auburn Wastewater Treatment Plant - Auburn, California
Preliminary Site Plan



Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The Day-night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. Where short-term noise sources are an issue, noise impacts may be assessed in terms of maximum noise levels, hourly averages, or other statistical descriptors. Please refer to Appendix A for definitions of acoustical terminology used in this report.

Vibration Fundamentals and Terminology

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities. Unlike noise, vibration dissipates rapidly with distance.

Existing Land Uses in the Project Vicinity

The existing WWTP site, which is also the location of the proposed expansion, is bordered by Wise Road to the north, and by Ophir Road to the south, as indicated on Figure 1. In general, the site is surrounded by agricultural and rural-residential land uses.

The nearest identified noise-sensitive receptors to the proposed project improvements consist of rural residences to the north on Wise Road (Receptor "A" on figure 1), and agricultural residences to the south of Geraldson Road which appear to be associated with Mandarin Orange growing operations (Receptor "B" on Figure 1). The nearest proposed improvements to receptors A and B will occur approximately 600 feet and 900 feet away, respectively.

Existing Noise Environment in the Project Vicinity

The existing ambient noise environment in the immediate project vicinity is defined primarily by water flowing in the creek along the northern site boundary, distant traffic and, to a lesser extent, existing WWTP operations. The noise generation of the WWTP is quite low at the monitoring sites closest to the two nearest residences (Sites 1 and 2), and was found to be audible only in the immediate vicinity of the plant equipment and processes.

To generally quantify the existing ambient noise environment in the project vicinity, a continuous (24-hour) ambient noise level measurement survey was conducted at four locations surrounding the project site on Wednesday, November 5, 2014. Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used for the noise level measurement survey. The meters were calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4). Figure 1 shows the noise measurement locations.

A summary of the noise level measurement results is provided below in Table 1. The detailed results of the ambient noise surveys are provided numerically in Appendix B and graphically in Appendix C.

Table 1 Ambient Noise Survey Results Summary Auburn WWTP Site Vicinity – November 5, 2014					
Site^A	Daytime (7 am to 10 pm)		Nighttime (10 pm - 7 am)		L_{dn}
	L_{eq}	L_{max}	L_{eq}	L_{max}	
1	48	56-72	49	54-70	55
2	50	57-70	49	56-70	56
3	56	60-80	56	57-73	62
4	56	60-94	53	60-80	60
^A See Figure 1 for noise measurement locations Source: Bollard Acoustical Consultants, Inc. (BAC)					

Existing Vibration Environment in Project Vicinity

During field inspections of the immediate project area and property lines nearest the existing residential areas, no discernible vibration levels were observed. In addition, no significant vibration-generating equipment was observed to be in operation at the project site. As a result, baseline vibration levels are negligible, and below the thresholds of perception.

Regulatory Setting

City of Auburn General Plan

The following relevant goals and policies are contained in the City of Auburn General Plan Noise Element.

Goal 1: To protect City residents from the harmful and annoying effects of exposure to excessive noise.

Policy 1.1 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 2 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. (Requirements for the content of an acoustical analysis are given by Table 3.)

Policy 2.2 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 2 as measured immediately within the property line of lands designated for noise-sensitive uses. This policy does not apply to noise sources associated with agricultural operations on lands zoned for agricultural uses.

Table 2 Noise Level Performance Standards for New Projects Affected by or Including Non-Transportation Sources		
Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Average (Leq), dB	55	45
Maximum level (Lmax) dB	75	65
Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).		

Table 3
Requirements for an Acoustical Analysis

An acoustical analysis prepared pursuant to the Noise Element shall:

- A. Be the responsibility of the applicant.
- B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
- C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
- D. Estimate existing and projected (20 years) noise levels in terms of Ldn or CNEL and/or the standards of table VIII-1, and compare those levels to the adopted policies of the Noise Element. Noise prediction methodology must be consistent with the appendix to the Noise Element.
- E. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
- F. Estimate noise exposure after the prescribed mitigation measures have been implemented.
- G. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

Placer County Noise Standards

Although the project site is located within the City of Auburn, some of the surrounding properties are located outside of the City limits and would be subject to the Placer County noise standards. With one exception, the County noise standards are identical to the City's noise standards shown in Table 2. The exception is that the County applies a 70 dB Lmax noise standard during daytime hours whereas the City utilizes a 75 dB threshold.

The noise generation of the WWTP facility is primarily steady state, rather than exhibiting large fluctuations in noise levels. This is because noise generated by pumps and water flowing is fairly constant, with no large variation between average and maximum noise levels. Therefore, the noise standards which would be most applicable to this project would be the City and County average (Leq) noise standards, which are the same for both the City and the County. Compliance with the Table 2 average noise level limits would, therefore, ensure compliance with both the City and County maximum (Lmax) noise standards. As a result, this analysis focuses on compliance with the City and County average (Leq) noise standard.

Vibration Standards

The City of Auburn Noise Element does not contain specific policies pertaining to vibration levels. Nonetheless, because the CEQA Guidelines include vibration with the noise criteria, potential impacts associated with project vibration are considered in this analysis.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 4 indicates that the threshold for damage to structures ranges from 2 to 6 in/sec. One-half this minimum threshold, or 1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v. (ESA, 1996).

Table 4 General Human and Structural Responses to Vibration Levels	
Effects on Structures & People	Peak Vibration Threshold (in/sec PPV)
Structural damage to commercial structures	6
Structural damage to residential buildings	2
Architectural damage	1.0
General threshold of human annoyance	0.1
General threshold of human perception	0.01
Sources:	Survey of Earth-borne Vibrations due to Highway Construction and Highway Traffic, Caltrans 1976. Final Environmental Impact Report: Richmond Transport Project, Orion Environmental Associates, 1990. Weekly Progress Report for Vibration Monitoring for Richmond Transport, Wilson, Ihrigg & Associates, 1994

Project Impacts and Mitigation Measures

Significance Criteria

Appendix G of the State CEQA Guidelines provides that the proposed project would result in a significant noise impact if the following occur:

- A. exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- B. a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- C. a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- D. exposure of persons to or generation of excessive groundborne vibration or noise levels;
- E. for a project located within an ALUP or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, the project would expose people residing or working in the project area to excessive noise levels;
- F. or a project within the vicinity of a private airstrip, the project would expose people residing or working in the project area to excessive noise levels.

Because this project is not located in an area which is impacted by aircraft noise, items E and F listed above would not apply.

Methodology

WWTP Operations:

Noise measurement results of existing plant equipment were used to evaluate potential noise impacts associated with the proposed facility improvements. Specifically, BAC conducted noise level measurements of individual components of the existing facility which will reportedly be similar to components in the expanded facility on the afternoon of November 20, 2014. Those reference noise level measurements were projected from the location of the proposed equipment to the nearest potentially affected residences to the corresponding equipment.

The existing plant equipment which was reported by WWTP staff to be generally similar in terms of noise generation was the aerators, oxidation ditch, and pumps. At a reference distance of 50 feet from each of these sources, measured average noise levels ranged from 58 to 65 dB Leq. WWTP Staff also report that new aerators are rated at 72 dB at a distance of 3 feet, which is considerably quieter than existing operations. When projected to the nearest residences located between 600 and 900 feet from the proposed improvements the resulting range of average noise levels associated with the proposed expansion computes to 33-43 dB Leq. This range of noise levels does not include an adjustment for shielding by intervening topography and structures, or the fact that some of the proposed pumps will be submerged. After consideration of that shielding, ultimate plant expansion noise emissions are predicted to be below 40 dB Leq at the nearest residences. When added to existing ambient noise levels reported in Table 1, the net increase in ambient noise levels at the nearest residences is predicted to range from 0 to 1 dB.

Project Construction Noise:

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in typical construction would generate maximum noise levels, as indicated in Table 5, ranging from 70 to 90 dB at a distance of 50 feet. Construction activities are proposed to occur during normal daytime working hours.

Table 5
Typical Construction Equipment Noise

Equipment Description	Maximum Noise Level at 50 feet, dBA
Auger drill rig	85
Backhoe	80
Bar bender	80
Boring jack power unit	80
Chain saw	85
Compactor (ground)	80
Compressor (air)	80
Concrete batch plant	83
Concrete mixer truck	85
Concrete pump truck	82
Concrete saw	90
Crane (mobile or stationary)	85
Dozer	85
Dump truck	84
Excavator	85
Flat bed truck	84
Front end loader	80
Generator (25 kilovoltamperes [kVA] or less)	70
Generator (more than 25 kVA)	82
Grader	85
Hydra break ram	90
Jackhammer	85
Mounted impact hammer (hoe ram)	90
Paver	85
Pneumatic tools	85
Pumps	77
Rock drill	85
Scraper	85
Soil mix drill rig	80
Tractor	84
Vacuum street sweeper	80
Vibratory concrete mixer	80
<i>Source: Federal Highway Administration 2006.</i>	

A the nearest residences, located between 600 and 900 feet from project construction activities, maximum noise levels would be approximately 25 dB lower than the reference levels cited in Table 5 for the 50 foot measurement distance. The resulting maximum noise levels at the nearest residences would range from 45 dB to 65 dB Lmax.

Specific Project Impact and Mitigation Statements

Impact 1: Operational Noise (LTS)

Noise generated by the expanded WWTP operations are predicted to be 40 dB Leq or less at the nearest noise-sensitive land uses to the project site. This range of noise levels is well below both existing ambient conditions and below the City of Auburn and Placer County daytime and nighttime noise level standards. When added to existing ambient noise levels reported in Table 1, the net increase in ambient noise levels at the nearest residences is predicted to range from 0 to 1 dB, which is considered an imperceptible increase. As a result, this impact is considered **less than significant**.

Impact 2: Construction Noise (LTS)

Maximum noise levels generated during construction of the WWTP improvements are predicted to be approximately 45 to 65 dB Lmax at the nearest residences. This range of noise levels is well below both existing ambient conditions and below the City of Auburn and Placer County daytime and nighttime noise level standards. In addition, construction noise generation would be short-term and limited to daytime hours. As a result, this impact is considered **less than significant**.

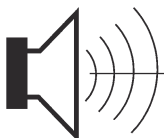
Impact 3: Construction and Operation Vibration (LTS)

No discernible vibration levels were observed at the site boundaries for existing WWTP operations. Because the new equipment to be installed as part of the proposed expansion would be fairly similar to existing equipment, post-project vibration levels are similarly expected to be imperceptible at the site boundaries. As a result, this impact is considered **less than significant**.

Appendix A

Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.



BOLLARD

Acoustical Consultants

Appendix B-1
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 1
Wednesday, November 05, 2014

Hour	Leq	Lmax	L50	L90
0:00	47	54	46	44
1:00	46	64	45	44
2:00	46	61	46	44
3:00	48	70	46	44
4:00	48	55	47	45
5:00	51	62	50	47
6:00	53	64	52	50
7:00	53	63	53	50
8:00	48	61	48	45
9:00	45	63	43	41
10:00	49	72	42	41
11:00	46	68	42	41
12:00	43	56	41	40
13:00	42	56	41	40
14:00	43	63	42	41
15:00	43	61	42	41
16:00	45	59	44	42
17:00	48	58	47	46
18:00	49	56	48	47
19:00	50	60	49	47
20:00	49	68	49	47
21:00	49	64	48	47
22:00	48	65	48	46
23:00	48	64	47	45

Statistical Summary						
Daytime (7 a.m. - 10 p.m.)				Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	53	42	48	53	46	49
Lmax (Maximum)	72	56	62	70	54	62
L50 (Median)	53	41	45	52	45	47
L90 (Background)	50	40	44	50	44	46

Computed Ldn, dB	55
% Daytime Energy	57%
% Nighttime Energy	43%

Appendix B-2
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 2
Wednesday, November 05, 2014

Hour	Leq	Lmax	L50	L90
0:00	47	56	47	46
1:00	49	68	47	46
2:00	48	68	47	46
3:00	48	65	47	46
4:00	49	70	48	47
5:00	51	68	50	48
6:00	52	61	52	51
7:00	52	70	51	50
8:00	49	63	49	47
9:00	48	60	48	47
10:00	51	69	49	48
11:00	50	67	49	48
12:00	49	61	49	48
13:00	50	59	49	48
14:00	50	63	50	48
15:00	50	60	49	48
16:00	50	57	50	49
17:00	52	57	52	51
18:00	52	58	52	50
19:00	50	65	49	48
20:00	50	67	49	48
21:00	50	67	49	48
22:00	49	69	48	47
23:00	48	61	48	47

Statistical Summary						
Daytime (7 a.m. - 10 p.m.)				Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	52	48	50	52	47	49
Lmax (Maximum)	70	57	63	70	56	65
L50 (Median)	52	48	50	52	47	48
L90 (Background)	51	47	48	51	46	47

Computed Ldn, dB	56
% Daytime Energy	68%
% Nighttime Energy	32%

Appendix B-3
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 3
Wednesday, November 05, 2014

Hour	Leq	Lmax	L50	L90
0:00	55	61	55	54
1:00	55	69	55	54
2:00	55	70	55	54
3:00	55	73	55	54
4:00	55	57	55	54
5:00	56	70	56	54
6:00	57	64	57	56
7:00	57	67	57	56
8:00	58	80	55	54
9:00	54	62	54	53
10:00	54	64	54	53
11:00	54	65	54	53
12:00	54	65	54	53
13:00	54	70	54	53
14:00	55	60	54	53
15:00	55	60	55	54
16:00	56	65	56	54
17:00	57	68	57	56
18:00	57	62	57	56
19:00	57	67	56	55
20:00	57	68	57	56
21:00	56	67	56	55
22:00	56	66	56	55
23:00	56	69	56	54

Statistical Summary						
Daytime (7 a.m. - 10 p.m.)				Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	58	54	56	57	55	56
Lmax (Maximum)	80	60	66	73	57	66
L50 (Median)	57	54	55	57	55	55
L90 (Background)	56	53	54	56	54	54

Computed Ldn, dB	62
% Daytime Energy	64%
% Nighttime Energy	36%

Appendix B-4
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 4
Wednesday, November 05, 2014

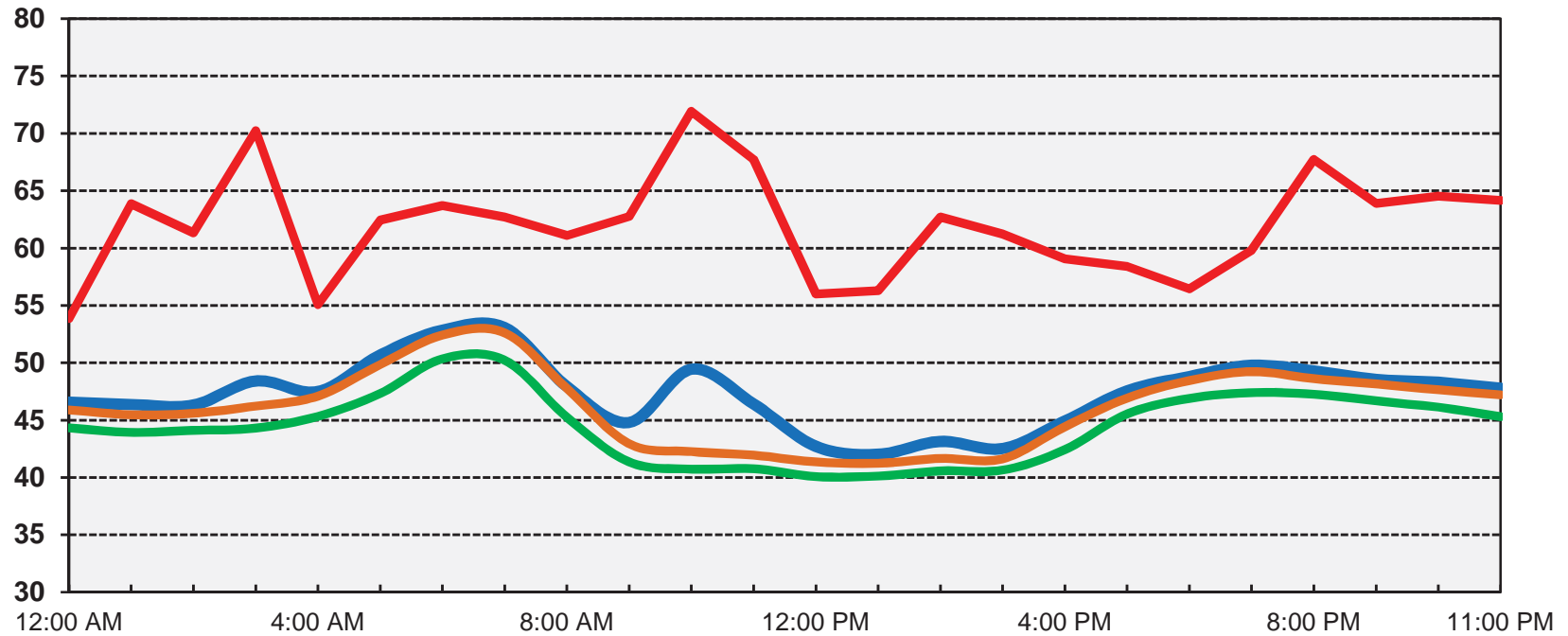
Hour	Leq	Lmax	L50	L90
0:00	50	65	50	49
1:00	51	67	50	49
2:00	51	73	50	49
3:00	52	69	50	49
4:00	51	60	51	49
5:00	54	67	53	51
6:00	56	80	55	54
7:00	56	76	55	54
8:00	57	85	53	51
9:00	56	85	51	50
10:00	56	84	52	51
11:00	53	63	53	51
12:00	54	74	53	52
13:00	62	94	53	52
14:00	55	79	54	53
15:00	53	60	53	52
16:00	55	63	54	53
17:00	58	65	58	56
18:00	57	64	56	54
19:00	53	67	53	51
20:00	55	68	54	52
21:00	54	71	54	52
22:00	52	66	52	50
23:00	52	76	51	50

Statistical Summary						
Daytime (7 a.m. - 10 p.m.)				Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	53	56	56	50	53
Lmax (Maximum)	94	60	73	80	60	69
L50 (Median)	58	51	54	55	50	51
L90 (Background)	56	50	52	54	49	50

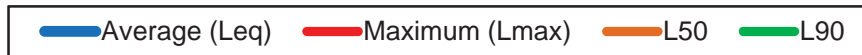
Computed Ldn, dB	60
% Daytime Energy	80%
% Nighttime Energy	20%

Appendix C-1
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 1
Wednesday, November 05, 2014

Sound Level, dBA



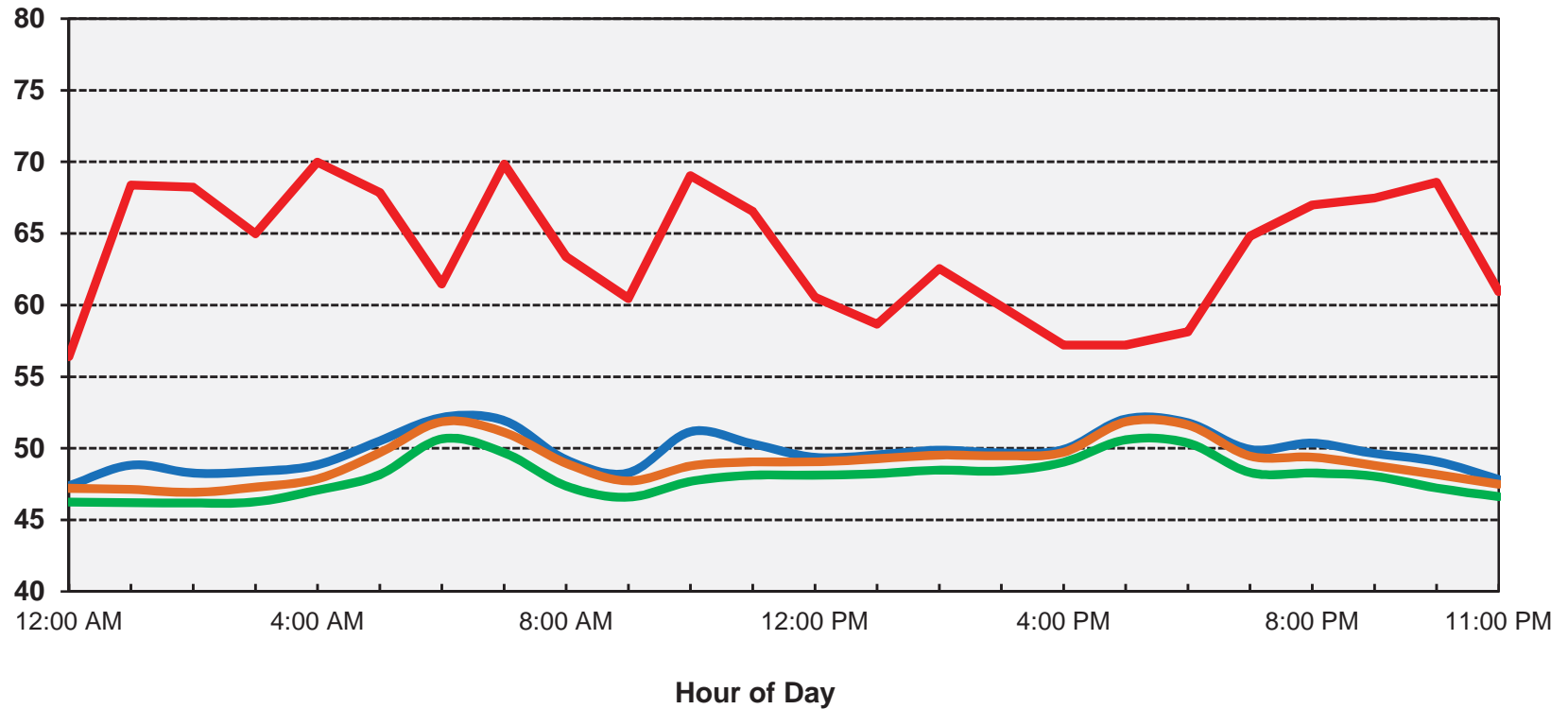
Hour of Day



Ldn: 55 dB

Appendix C-2
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 2
Wednesday, November 05, 2014

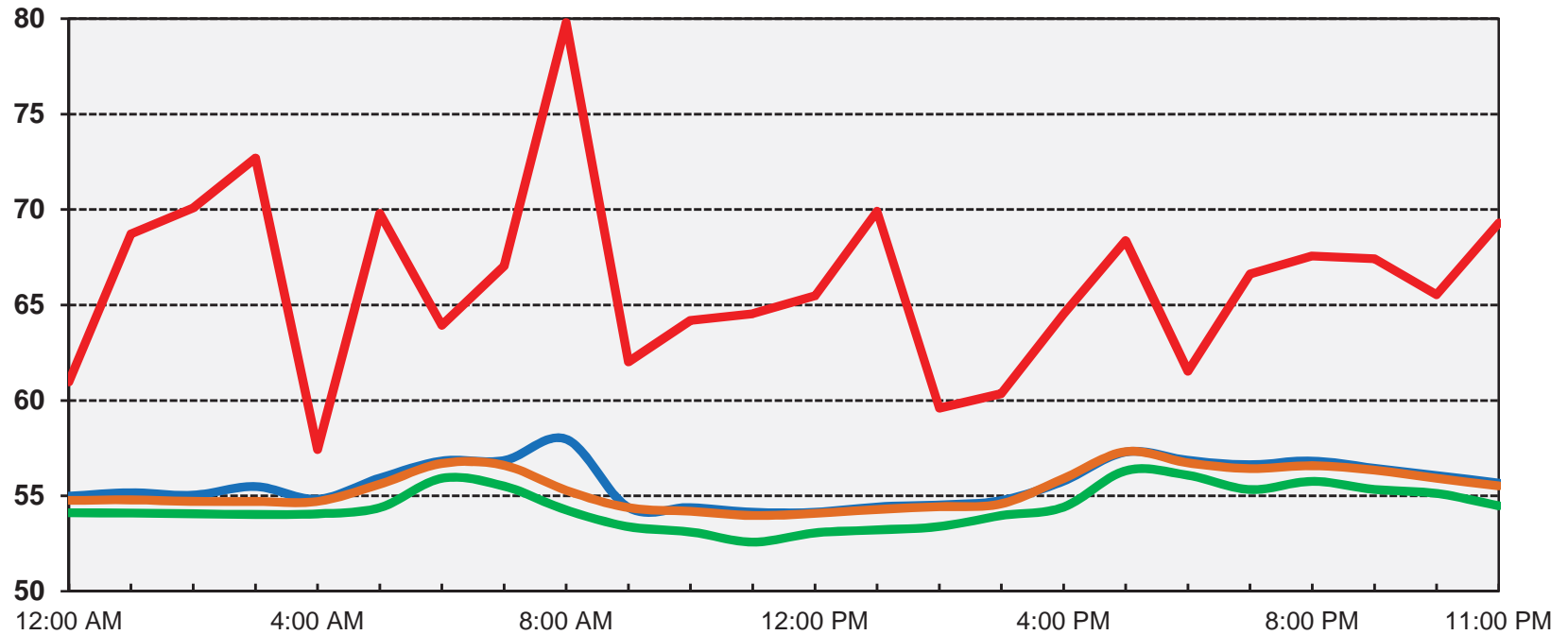
Sound Level, dBA



Ldn: 56 dB

Appendix C-3
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 3
Wednesday, November 05, 2014

Sound Level, dBA



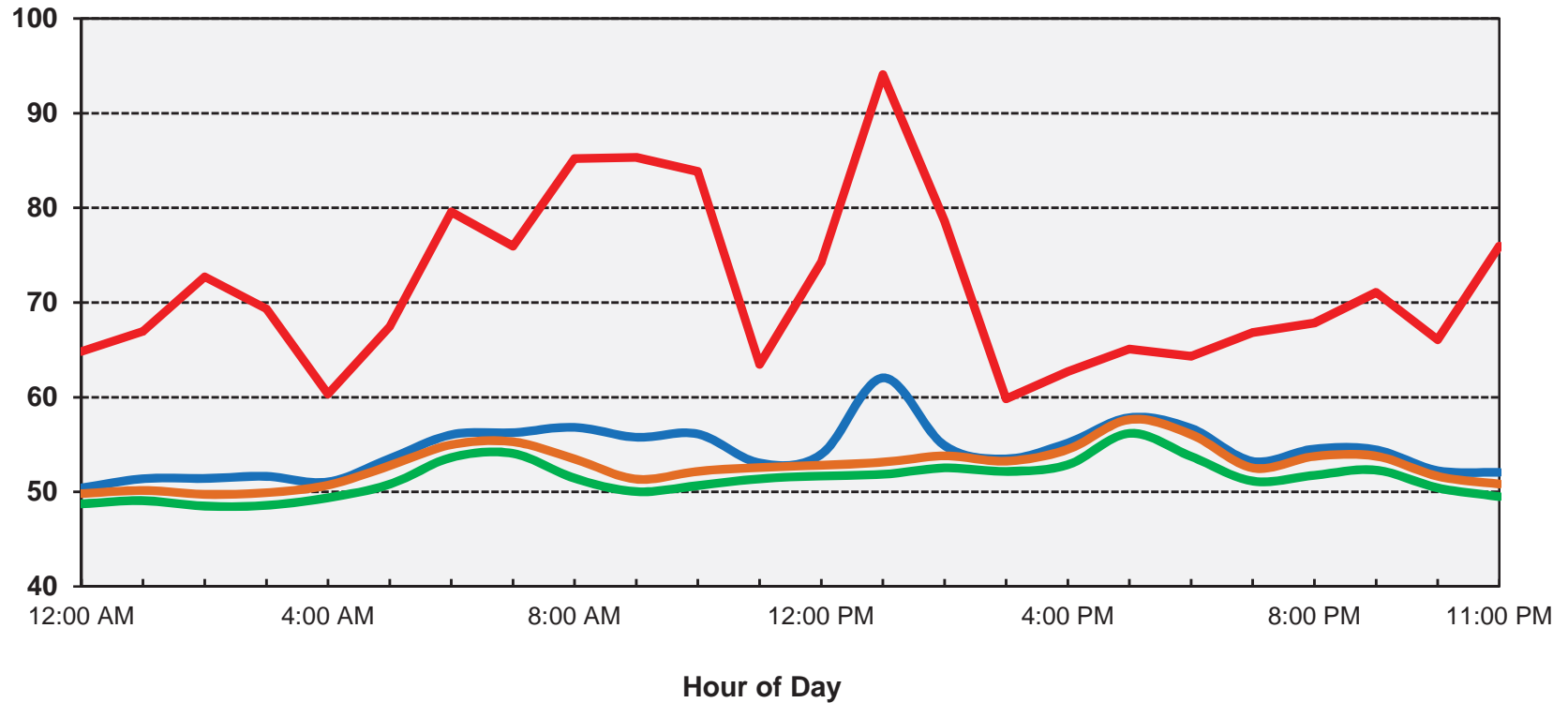
Hour of Day

— Average (Leq) — Maximum (Lmax) — L50 — L90

Ldn: 62 dB

Appendix C-4
2014-291 Auburn Wastewater Treatment Plant
Ambient Noise Monitoring Results - Site 4
Wednesday, November 05, 2014

Sound Level, dBA



— Average (Leq) — Maximum (Lmax) — L50 — L90

Ldn: 60 dB